

AMERICAN ARTISAN and Hardware Record

VOL. 78. No. 19.

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The kind of Files good mechanics want



The kind of Files live dealers sell

This is the combination that can make good file business for you, Mr. Dealer.

Are your file customers coming back for more files?

They are if you sell **HELLER CELEBRATED AMERICAN FILES AND RASPS.**

Once a mechanic uses a **HELLER FILE** he sticks to it and if you are the dealer who sells it to him he sticks to you.

HELLER FILES cut well, wear well and last long. They are made from our own refined clay crucible cast steel.

HELLER FILES are manufactured by machines of our own patented construction and each and every file receives special tempering. No matter what your customers may want in the way of files you can serve them if you have a stock of **HELLER FILES** on hand. Order a sample stock now. Build up a "*come back for more*" trade.

SWISS PATTERN FILES

On your calls for **SWISS PATTERN FILES**, offer **HELLER FILES** and be sure that your customer gets the best. We manufacture a most complete line. You can get **HELLER SWISS PATTERN FILES** in any style or shape for all kinds of work.

Our new catalog illustrates and describes in full our complete line.

Write for it today—just send us your name.

HELLER BROTHERS COMPANY

Established 1836 NEWARK, NEW JERSEY Incorporated 1899



MAHONING HEATERS

Sell Themselves

So many superior qualities are involved in **MAHONING** construction that to tell of one would slight others equally as important.

No need to *talk* Mahoning qualities. *Show* your customer,—he will see it at a glance.

We want good live dealers everywhere, and offer a tempting proposition.

A style and size for every purpose.



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The MAHONING FOUNDRY CO.

YOUNGSTOWN, OHIO

A Mammoth Plant With a Mammoth Production

FRONT RANK

TRADE NAME REGISTERED

The Steel Furnace that is positively *gas-tight*, because it's *made right*.

Made of tested metal, cold-riveted together. No direct draft to warp and buckle. Stays in order.

If you're not handling the **FRONT RANK** you, your customers and we are all losing money. Write for illustrated literature and prices.

FRONT RANK

Steel Furnace

is fool-proof. Gets more heat value out of the fuel used; because its radiating surface is greater, and more of the heat generated in burning the coal is extracted before the smoke and gases are passed on up the flue.

Haynes-Langenberg Mfg. Co.

4058 Forest Park Blvd.

St. Louis, Mo.



ESTABLISHED 1880

Representative of
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Sheet Metal, and Warm
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VARIOUS DEPARTMENTS OF health are preaching the doctrine of fresh air and its importance as a factor in maintaining health and strength. They do not make greater headway, however, because they run counter to a basic instinct of human nature. When they tell the folk to keep their windows open, especially in the bedrooms, during the coldest days of winter, they are wasting words and printer's ink. Particularly in these days of high prices, people are not willing to spend money for extra tons of coal to offset the lowering of the temperature of sleeping rooms caused by open windows. No well-informed person denies the needfulness of fresh air in winter as well as in summer. It is admitted that impure air weakens the body and renders it an easy victim to the attacks of disease.

Warm and Fresh Air.

What most of the public health experts seem persistently to avoid in their preachments of the need of fresh air is the advocacy of some system of heating which will supply fresh air in abundance without the discomfort of cold living and sleeping rooms. Owing to the praiseworthy habit of medical men in avoiding any semblance of commercial partisanship, they are silent, as a rule, upon the most efficient system of supplying fresh air without lowering the temperature. What professional ethics forbid physicians of health departments to advocate can legitimately be brought to the attention of the public by dealers and installers of warm air heaters working in cooperation with the health department. That is to say, they can use all the arguments advanced by the health department in favor of fresh air and give conclusiveness to such arguments by assuring the public that ample supplies of fresh air can be had in winter time without discomfort of any kind by the use of the warm air heating system. They can prove to the people that the warm air heater furnishes plenty of fresh air comfortably warmed and distributed throughout the house. The cold air intake of the warm air heater system heats the fresh air to a comfortable temperature and at least once an hour, if not oftener, completely renews the supply of clean, pure air in the homes. This desirable effect is accomplished without wide open windows and excessive consumption of fuels. Warm fresh air properly moistened is the most healthful. Cold fresh air with accompaniment of drafts and physical discomfort in winter time is not conducive to health; as the prevalence of the catarrh and other respiratory diseases in winter time fully demonstrates. The trade in warm heaters may be greatly increased by putting these facts before prospective customers and showing them how to com-

bine the utmost comfort with the necessary supply of pure air during the coldest part of the year.

THE MAN OF ambition works harder than the slug-
gard. He puts forth efforts which—according to na-
ture's basic law of compensation—in-

A Tax On Ambition.

crease his income. He earns everything he gets. It seems an injustice to penalize him for his energy and labor. Yet this is precisely what the excess profits tax does. The evils of such an impost are manifold. William B. Colver, member of the Federal Trade Commission, points out some of the more glaring consequences of the excess profits tax as follows:

"In the excess profits tax when a concern has reached beyond what is considered to be its normal profitableness, the surplus is partially taken from it by increasing percentages. What follows? Waste and extravagance; or an effort to make as much profit with the excess profits tax in operation as though it were not in operation and that is done by charging excess profits tax to cost. It means the collection from all the people, when the 60 per cent excess profits tax rate has been reached, of a dollar, unnecessarily, in order that 40 per cent may be added to divisible profit.

"And the excess profits tax or any other tax is not paid by the tax payer. It is passed on, it must be passed on, in the price of the product to the purchaser of the product, and, as it passes on and on, it grows, like a snow-ball rolling down hill, until it reaches the public. And the public, whether represented by a railroad president, a skilled mechanic, a farmer, a merchant, a common laborer or financier, having had the composite tax bill of all his predecessors passed to him, raises the price of his own labor whether that labor be stored up labor in the form of capital, labor of the hands, or labor of the mind, to meet the new cost of living. So, the distressing process having made a complete circle, it starts, again, the endless spiral upward."

NOTWITHSTANDING THE prevalence of labor disturbances, America is in a highly prosperous condition, according to the Federal Reserve Board review for the month of October. There is strong demand for commodities, verging at times upon recklessness in buying. Crop returns have been good in most sections, and even where decline in output has brought the total yield below the forecasts, prices are reported

Continuous Prosperity.

as the highest on record, the money returns being thus largely augmented in spite of the decreased volume.

Production of coal has been on the increase, while the demand has been unusually strong. There has been no decline in general manufacturing, while prices continue firm. The upward movement of trade usually noted in the autumn has been in evidence during the month. Commodity prices show a recession from the high levels reached during the month of August. The general index number of the Bureau of Labor Statistics stands at 221 for the month of September, as compared with the revised figure of 226 for the month of August, a decrease of 2.6 per cent. The downward tendency noted in some of the leading staples during the month of September has continued during October, in particular, corn and live stock, though increases are noted in the prices of other staples, such as raw cotton and silk and various of the non-ferrous metals.

"Scarcity of merchandise in certain leading lines, and insufficiency of anticipated output to meet demand are factors tending to keep these prices at present high levels," declares the report. "While there is a widespread belief that the peak of prices has been reached, in certain quarters no great declines in the near future are anticipated, but rather comparative stability. Producers' goods remained unchanged in price, the index number being 212, while decrease in price occurred for both the groups of raw materials and consumers' goods, the respective index numbers decreasing 1.7 per cent, from 218 to 214, and 6.3 per cent, from 241 to 226."

The report states that no abatement in general manufacturing is noted. The customary seasonal swell in the volume of business continues. Sales, both wholesale and retail, in many sections are reported to be in excess of those for previous months and for the same period last year. Stocks of both wholesalers and retailers in leading lines are running low, and complaint is being made of difficulty in obtaining merchandise.

AN UNREASONING HYSTERIA of legislation has been caused by the desire to find a remedy for strikes and other manifestations of social unrest. As **Unnecessary Legislation.** a matter of fact, ample remedies are already available in the well-established principles of law now in operation. New laws, with drastic provisions, worded in such a way as to express emotional reactions, serve only to irritate by their stirring up of old prejudices. What we need is sane and impartial enforcement of the laws now on our statute books. For example, the right of the employer to maintain an "open shop" without interference from labor unions is recognized by the Supreme Court of the United States in the case of *Hitchman Coal and Coke Company versus Mitchell*. The decision in this case was handed down December 10, 1917, and may be found on page 229 of volume 245 of the Court's decisions. In substance, it is as follows:

It was held that the employer who conducts his business on the non-union basis may have an understanding or agreement with his employees that they are non-union and will so continue while in his employment, and that officers and agents of labor unions, having knowledge

of such arrangement, may be enjoined from soliciting such employees for membership in the union and from interfering with such arrangement. In other words, an employer has the right to employ only those who are non-union and who agree to continue non-union while in his employment, and the employer is entitled in a proper case to have union interference with this arrangement enjoined.

To secure the benefit of this decision, the employer should have his employees sign cards indicating their clear understanding that the shop is operated non-union, etc. In the event that the union interferes with this non-union arrangement, the employer should serve notice of the arrangement upon those union officials, agents and agitators who are interfering with the arrangement between him and his employees. If such interference continues, the employer may ask that it be enjoined under the authority of the above decision without waiting until his place is picketed and until his employees and applicants for employment are intimidated.

THE MERCHANT who neglects his business to take part in politics or other things, is foredoomed to failure. Two striking proofs of this assertion are furnished by a Canadian contemporary. The first of these cases was met within the town of Cabri, Saskatchewan

Here the story was told of a merchant who formerly occupied a corner store, but who had made an assignment the year before. The consensus about this merchant was that he was one of the finest fellows the town had ever known, but that he talked too much. No man could have been more popular than he while he was in the town. He was president of the Board of Trade, and a member of several committees; he was chairman of the school board, and a trustee of the church. He also took a prominent part in politics. He was popular, extremely popular, and if he had had the money to back it up he probably would have come out on top. The trouble was that he neglected his business. He was always on the street or at meetings, or ball games, or something else when he should have been in the store.

When a customer did come in to see him, the story goes that he would spend a very considerable time in an effort to convert him to his side of politics. Meanwhile other customers waited. He formed enmities by the stand he took on various subjects before the numerous boards and lodges of which he was a member, and he let his business run itself. He was a good fellow and he allowed a heavy line of credit. Finally one day in Winnipeg there was a meeting of credit men. They decided that the Cabri merchant had reached the end of his tether, and they proceeded to jerk him up with a snap that could be heard in all the adjoining towns. At one sweep he lost his business, his home, and the savings of five years as represented in assets.

The second case was revealed in the town of Wetaskiwin, Alberta. Here a live wire has stepped in, and starting with a \$1,500 stock in 1916, he has developed his business in three years to the largest general store in the town with a turnover close to the

\$100,000 mark. Adjoining his premises is the big store that formerly held the premier place. Its proprietor was a member of the Provincial Parliament. He was accustomed to spend considerable time among his constituents and attending the sessions of the house. He left his business to his clerks. That is the explanation given by townspeople for the remarkable achievement of the stranger who usurped his position in the brief period of 36 months. The new man devoted his full time to the business. He made it a point to meet customers, make friends of them and see that they were satisfied. He strove in every way to give service. The people wanted service. They switched over to the new store.

RANDOM NOTES AND SKETCHES.

By Sidney Arnold.

Early in the week, I had a jolly visit from Anthony L. Castle, vice-president Channon Emory Stove Company, Quincy, Illinois.

* * *

I received an invitation this week from my friends, Mr. and Mrs. Frank B. Higgins, of St. Louis, Missouri, to the marriage of their daughter, Mary Evelyn, November 15, 1919. She is to be married to John B. McLennan. Her father is first vice-president of the National Association of Sheet Metal Contractors.

* * *

I should like to give the author of the subjoined paragraph credit for his work. But I don't know his name. The extract is from a clipping pasted in an old scrapbook which recently came into my possession:

"Just as long as we consider business dealings in a different light from personal honor, business will suffer from the blighting suspicion of distrust. One's business is the man—and the man is the business. Each depends upon the other and neither ever rises above the other. An honest man is an honest business man. There isn't any half way station. The days of the week or the character of the business have no bearing on the question and you and I have no moral right to bewail the sharp practices of others while we do nothing to raise the general average ourselves."

* * *

My friend, J. V. Armhorst of the Chicago office of Merchant and Evans Company, Philadelphia, Pennsylvania, told me this one:

A negro who was well known to the judge had been haled into court on a charge of having struck a relative with a brick. After the usual preliminaries, the court inquired:

"Why did you hit this man?"

"Jedge, he called me a black rascal."

"Well, you are one, aren't you?"

"Yessah, maybe I is one. But, Jedge, s'pose some-one should call you a black rascal, wouldn't you hit 'im?"

"But I am not one, am I?"

"Naw, sah, naw, sah; you ain't one; but s'pose some one'd call you de kind of rascal you is, what'd you do?"

A neighbor of my friend Robert C. Johnson of the National Screw and Tack Company, Chicago, Illinois, has a wife who became a movie actress. He remarked one day to his neighbor:

"I notice that you spend all your spare time at the pictures since your wife became a movie actress.

"Yes," he replied, "I think it's perfectly wonderful to see her carrying on for two mortal hours and never hear a word out of her."

* * *

I found the following paragraph in *Safety Hints*, the sprightly house organ of the Whitaker-Glessner Company, Wheeling, West Virginia. I like the sturdy Americanism of it and am glad to pass it on to my readers:

"Do you think of your Italian acquaintance as a 'Dago?' Marconi is of the same race. Do you refer to your Polish neighbor as a 'Polak?' Paderewski is a Pole. Are your Scandinavian fellow-workers 'Square-heads' in your mind? The inventor of dynamite and the armored battleship were men of that stock. And this argument applies to every race that has found a home in America. It is wrong thinking to use slurring names, even in your mind, about the men of another race. Think straight and judge a man by his character, not by his birthplace."

* * *

Experience is of little value unless one profits by it and gains wisdom, says my friend Charles E. Bushnell of Vaughan and Bushnell Manufacturing Company, Chicago, Illinois. By way of illustration, he relates this incident:

A lawyer once asked a man who had at various times sat on several juries, "Who influenced you most, the lawyers, the witnesses or the judges?" He expected to get some useful and interesting information from so experienced a jurymen. This was the man's reply:

"I tell yer, sir, how I makes up my mind. I am a plain man, and a reasonin' man, and I ain't influenced by anything the lawyers say, nor by what the witnesses say—no, nor by what the judge says. I just look at the man in the dock and I says 'If he ain't done nothing why is he there?' And I brings 'em all in guilty."

* * *

Success is not a matter of chance. It does not come as the rain or wind—independently of the will of man. It is the result of effort, of deliberate concentration of purpose, and of persistent endeavor. Edgar A. Guest phrases the thought thus:

Success Is In the Mind.

Success! It's found in the soul of you,
And not in the realm of luck!
The world will furnish the work to do,
But you must provide the pluck.
You can do whatever you think you can;
It's all in the way you view it.
It's all in the start that you make, young man,
You must feel that you're going to do it.

How do you tackle your work each day?
With confidence clear, or dread?
What to yourself do you stop and say,
When a new task lies ahead?
What is the thought that is in your mind?
Is fear ever running through it?
If so, tackle the next you find
By thinking you're going to do it.

AMERICAN ARTISAN

HENRY E. SCHWAB.

Look in the dictionary for the word "time." You will find that it is explained as "duration considered independently of any system of measurement, or any employment of terms which designate limited portions thereof." It is at once the most precise and the most elusive of terms. It has engaged the study of philosophers in all ages. Among the moderns, the great French thinker, Henri Bergson, has applied himself most intensely to its analysis. He speaks of time as being not merely an abstract relation, but a substance fluid and tangible. He considers it as relative only in its uses by different individuals, though absolute and unchanging in the sum of its possibilities. For purposes of comparison, we may accept Bergson's concept of time. Within the limits of each day all persons, rich, or poor, clever or stupid, old or young, possess precisely the same amount of this precious substance. Indeed, if one were searching for some indispensable basis upon which to postulate the equality guaranteed by the Constitution of the United States, one would discover it in this fundamental sameness of amount of time at the disposal of every human being. Divergences of character and accomplishment which controvert that equality have their starting-point in the differences of use which each individual makes of the time which is his. While everyone has sixty minutes in the hour, all do not avail themselves of the full contents of the hour. Some scatter the seconds wastefully. Thus they derive only the minimum of their power. Others concentrate them and get increasingly higher averages out of the total of their possibilities. Whether it be in shoveling sand, chopping down trees, making warm air heaters, or selling shoes, the actual things done in a given hour are the measure of man's exploitation of time.

Herein we have a logical gage of the individual. During the interval in which one man dawdles, another may decide the fate of empires. What a man does with his time and in his time tells us more eloquently what he is than all the words in the dictionary. For those who need encouragement there is a lesson and tonic in studying the growth and worth of Henry

E. Schwab, Vice-President and Treasurer of R. J. Schwab and Sons Company, Milwaukee, Wisconsin. Before he reached voting age he was treasurer of the company, purely on his merits and as a consequence of his using to the best advantage every atom of the substance of time of his foregoing years.

Henry E. Schwab was born in Milwaukee, Wisconsin, June 9, 1881. He received his primary education in the public and High Schools of his native city. Afterward, he studied law in the Marquette University, Milwaukee, Wisconsin, and in the Milwaukee Law School. Although he was destined for a business career, this legal training was considered a profitable addition to his mental equipment. What-

ever may be said to the contrary by cynics and professional humorists, legal training sharpens the intellect and develops the faculty of analysis. It is, therefore, a great advantage to men who occupy executive positions in the business world.

The subject of this sketch made good use of, and continues to employ to excellent purpose, the knowledge of law which he acquired during his minority. When, in 1901, he entered into business with his father, R. J. Schwab, the firm was incorporated as R. J. Schwab and Sons Company; and, as already stated, although he was only 20 years of age, he was chosen treasurer of the company. This selection was not effected because he was the son of R. J.

Schwab but for a much better reason. So thoroughly had he utilized his time in school that, before he reached his majority, he had developed his talents and ability to a degree not usually attained by men several years past the age of citizenship.

At 21 years of age he assumed the position of vice-president of R. J. Schwab and Sons Company while retaining the office of treasurer of the concern. His close application to his business, however, does not preclude his participation in other matters. He is a member of Kenwood Masonic Lodge, Excelsior Chapter, Association of Commerce, and Kiwanis Club. He is also on the County Public Affairs Commission and has done much for the civic betterment of his city. He is fond of tennis and baseball.



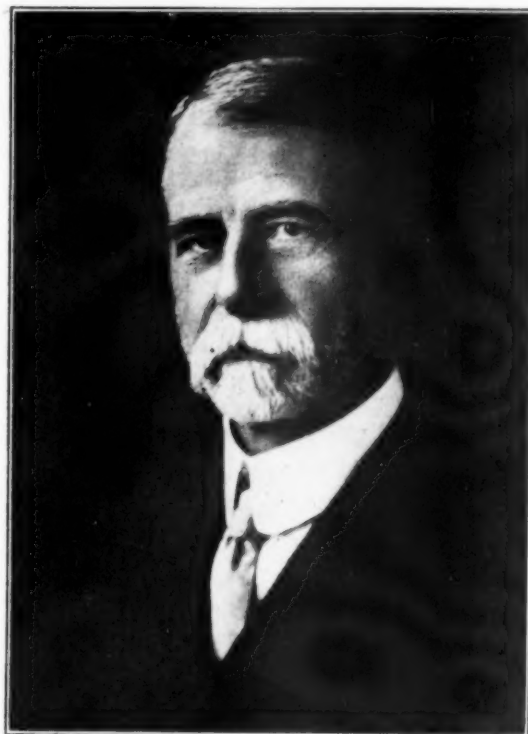
HALL OF FAME

HENRY B. SARGENT.

The amount of energy locked up in the human brain is practically unlimited. Most men use only an infinitesimal part of it. That accounts for the dullness of their lives and the smallness of their achievements. Others do big things because they use large quantities of that energy. The career of Henry B. Sargent is opulent in accomplishment because of the amount of energy which he employed. He was born in New York City, March 4, 1851. His father was the founder and head of Sargent and Company, manufacturers of small hardware, New Haven, Connecticut. His grandfather, Joseph Denning Sargent, began manufacturing in Leicester, Massachusetts, in 1814. When he was five years of age, he moved with his parents to New Britain, Connecticut, where he resided until 1864, when the business of Sargent and Company was moved to New Haven, Connecticut. He was educated in the public schools and in the fall of 1868 entered Sheffield Scientific School of the Yale University, from which he was graduated in 1871. In the summer and fall of 1870, while a Yale Junior, he was a member of Professor O. C. Marsh's Pioneer Paleontological Exploring Expedition, spending six months in some of the so-called "bad" lands west of the Mississippi River. As an undergraduate, he passed all collegiate examinations without conditions. In undergraduate sports he was a baseball player, a member of the Gymnasium Exhibition Squad; a member of crew representing the Sheffield Scientific School in interdepartment boat races, and was a fair boxer, and an adept ice skater. Upon his graduation, he entered the employ of Sargent and Company as general inspector of product after having qualified for the position through effective service in this line during his several school and college vacations. He was soon made assistant superintendent. In 1887, he became Vice-President of the Company and recognized as General Manager of manufacturing. He succeeded to the presidency of Sargent and Company in 1917, on the death of President George Henry Sargent, brother of Joseph Bradford Sargent, who had succeeded the latter on his death.

Notwithstanding the thoroughness of his devotion to

the development of the business, he contrived to find time to keep up his activities in University affairs. From 1878 to 1902 he was a graduate member of the Yale University Athletic Committee; a director and Treasurer of Yale Field Corporation from its beginning in 1880 to 1899, when the property was transferred to the University. In 1896, by a vote of the alumni, he was elected a Fellow, or Trustee, of Yale for the regular term of six years, and was re-elected in 1902 and again in 1914. He has been a member of the Executive Committee of the Trustees for several years. He is director of a Girls' College Preparatory and Boarding School, the Ethel Walker School, Incorporated, of Simsbury, Connecticut.



He is prominent in public service. For a time he was member of the City Board of Education, and served the city of New Haven as Councilman for the three terms of 1883, 1884, and 1885. For several years he was a director of the Organized Charities of New Haven, and the National Savings Bank of New Haven. He is a director of the New Haven Dispensary, and the New Haven Bank, N. B. A. He is a member of the Connecticut Academy of Arts and Sciences; one of the executive committee of the New Haven Chamber of Commerce; Vice-President of the New Haven County Employers' Association; director of the Connecticut Manufacturers' Association; and a member of the Executive Committee of the

League for Industrial Rights of New York. He belongs to the American Hardware Manufacturers' Association and is active in its committee work. He is the Senior Vice-President of the American Society of Mechanical Engineers. He holds membership in the Graduate Club of New Haven and in the New Haven Country Club, of which he was President for three years.

He is a member of the Oquossoc Fishing Club in the Rangeley region of Maine and an active member of the Senior Golf Association. For years he rode a wheel, but has never had an automobile. This is to his credit on the theory of the old saw which declares that "A woman is as old as she looks, and a man is as old as his legs."

UP TO THE MINUTE NEWS SIFTINGS

FOREIGN BUSINESS LEADERS VISIT INDUSTRIAL CENTERS OF AMERICA.

The delegates from Belgium, France, Great Britain and Italy and representatives of the American delegates who lately at Atlantic City set the machinery in motion for the restoration of world commerce now are making a tour of this country for the purpose of obtaining first hand information about trade conditions from leading industrial centers. There are about 80 in the party, traveling by special train, the tour having been arranged by the Chamber of Commerce of the United States under whose auspices the International Trade Conference at Atlantic City, New Jersey, was held.

The visitors from abroad are those who will shape the financial, commercial and industrial destiny of Europe, and the men who represent the United States on the tour are recognized leaders of business on this side of the Atlantic. It is regarded as the most distinguished international group of business men ever taken on a trip in any country.

Some of the foreign delegates have been in the United States before, but most of them are on their first visit, and their enthusiasm is growing daily. The American soldiers having welded the ties of friendship between this country and the Allies during the war, the Belgian, English, French and Italian delegates feel that they are not coming here as strangers, even though names are unfamiliar and national characteristics different. This feeling enables them to get acquainted with American business men easily, throw off restraint quickly, ask questions eagerly, and answer questions promptly.

The Atlantic City Conference and the tour, it is believed, will work powerfully toward the general education of the five countries associated in the war. The information developed is specific, and it has been given to the public in a manner interesting, even dramatic.

America now knows what her allies need, and the action taken at Atlantic City indicates that their needs will be met. It resolves itself into a business proposition of enormous proportions to be handled in a business way, with credit as the base. A permanent organization was formed to make effective the purpose of the Conference. An international meeting will be held in 1920, after that the gatherings to be biennially. Approval was given to the Edge bill, now in Congress, authorizing financial assistance in Europe, and also to effective investments in foreign credits against which debentures of American companies may be issued.

England asks only for an opportunity to purchase in America certain commodities for which she can pay. Belgium, which is recovering rapidly from the

war, asks for credit to enable her to buy here. France and Italy have the most pressing needs, and their request is for long time loans. The Conference Committee on Credit and Finance developed these points:

1.—Europe is greatly in need of raw materials, food and machinery.

2.—America's prosperity is bound up in Europe's prosperity, for Europe can not even pay the interest on the debt she owes us unless she can be restored to production.

That the International Trade Conference will be able to frame a program which will help Europe regain her feet commercially and industrially is the belief of the delegates to Atlantic City, as expressed in the resolution adopted.

COMBINES SIMPLICITY AND UTILITY.

Simplicity is desirable. Especially in household devices should ease of handling be insured in order to

provide for efficient usage by unskilled persons. Doing away with intricacies in stoves does not necessarily mean cutting down the utility of the article. Indeed, it may enhance its usefulness. Simplicity and sturdiness are the salient features of the Cesco Duplex Heater, illustrated herewith, manufactured by the Channon-Emery Stove Company, Quincy, Illinois.



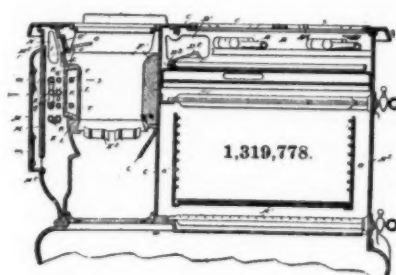
Cesco Duplex Heater, Made by
the Channon-Emery Stove
Company, Quincy, Illinois.

After years of experimenting, declare the makers, they have been able to produce a heater that will give satisfactory results in operating because of simple arrangement. Either coal or wood can be successfully burned. The construction of the linings, grates and deflector plates increases the heat-producing properties of this product, over the manufacturers. Regulation and control are perfect, they state. Besides being simple and sturdy in construction, nickle trimmings add to its neat appearance. The handsome designs of the nickeled parts, say the producers, enhance its sales qualities, as well as ornament the room in which the heater is installed. Four sizes of these heaters are made. Catalogue, and information pertaining to the handling of these products can be obtained from the Channing-Emery Stove Company, Quincy, Illinois.

He who sows in a poor soil can not expect good harvests. Don't waste good work on bad material.

ACQUIRES PATENT FOR RANGE.

James A. Lansing, Scranton, Pennsylvania, has obtained United States patent rights, under number 1,319,778, for a range described as follows:



In a range, the combination of a firebox for the consumption of solid fuel, a gaseous fuel chamber in proximity thereto, a water front interposed between and having its op-

posite sides exposed to the firebox and gaseous fuel chamber, water coils for the circulation of water located in the gaseous fuel chamber, a common inlet for the coil and water front, a common outlet for the coil and water front, and gaseous fuel burners in the gaseous fuel chamber positioned immediately below the water coil and immediately beside the water front so that the flame of said burners will impinge against said water front whereby when the gaseous fuel burners are used to heat water in the coil the water in the water front will be heated to a degree to prevent local circulation between the coil and water front.

ASK YOURSELF THE QUESTIONS.

Is my ambition sagging?
Am I 100 per cent proficient?
Am I up to standard all along the line?
What is my weak link?
Am I doing my best to strengthen it?
Are my ideals bright, is my vision clear and vivid?
Am I a loyal employe, faithful worker, true friend?
Am I keeping myself fit, physically, mentally and morally?

Am I making the most of my opportunities?
Do I believe in myself as I should? Have I that faith which actuates men to do big things?

Do I believe that I can make a success of what I have undertaken, or am I undermining my chances by doubts and fears?

Am I drifting, or vigorously plying the oars of my lifeboat?

What am I doing with my spare time? Giving it all to pleasure, or banking it in self-improvement?

Do I suffer with discouragement, the "blues," melancholy, or am I an optimist to the backbone?

How much sand have I? How much iron in my blood? How much lime is in my backbone?

Am I expecting the best things to come to me today, this week, this year; or am I attracting the worst things by anticipating them, holding them in mind, expecting them?

Have I that bulldog grip, that tenacity of purpose which never lets go, knows no retreat? Have I that clear grit which pushes on when everybody else gives up and turns back?

Am I flinging my life into my vocation with all the energy and determination I can muster? Am I all there, or only a part of me?

Am I fulfilling my obligations to my family, to my employes, to my friends, to my neighbors, to my country?

Am I living up to the highest ideals of honesty, purity, truth, honor, a clean manhood?

Am I always trying to better my best to improve something somewhere?

PRODUCES RELIABLE STOVE BOLTS.

The self-evident truth as to the uselessness of a chain whose one link is defective is applicable to any other mechanical device. Bolts are the links in the construction of mechanical instruments. Many cases are on record where a defective bolt wrought disastrous breakdowns. Precision should be exercised in the selection of stove bolts. The Kirk-Latty Manufacturing Company, West 85th Street, Cleveland, Ohio, manufacture a standard grade of bolts. Their constant aim is quality and service. As well as a complete line of stove bolts and nuts, they manufacture rivet products, juvenile bicycles, play autos, hand cars, etc. A communication to the Kirk-Latty Manufacturing Company, West 85th Street, Cleveland, Ohio, concerning their products will receive a satisfactory reply.



Flathead Stove Bolt, Made by the Kirk-Latty Manufacturing Company, Cleveland Ohio.

SHOULD ENJOY EACH DAY'S WORK.

Don't place your all on the chance of success. Enjoy your work as you go along. Success when arrived at may prove an empty shibboleth. Make each day's work a source of pride. And while you are building your tower to the heights of Success, see to it that each brick is solidly placed so that when you near the top, a misplaced brick will not cause your temple to tumble.

CEMENT RESISTS ACIDS AND FIRE.

Russian Asbestos Cement, manufactured by the Nickel Plate Stove Polish Company, 358 East Illinois Street, Chicago, Illinois, is for mounting and packing joints and seams in ranges, stoves and warm air heaters, making them gas tight. This cement is composed of asbestos materials and is fire and acid proof. It hardens quickly and adheres to place of application after hardening. Asbestos has long been known for its non-conduction of heat. Russian Asbestos Cement is a pliable form of asbestos. It can be applied to crevices, joints, seams, etc. Its utility can easily be seen by mechanics requiring a cement which should be fire and acid proof. The Nickel Plate Stove Polish Company also makes a complete line of high-grade stove polish. Details, prices, etc., on Russian Asbestos Cement will be sent upon inquiry to the Nickel Plate Stove Polish Company, 358 East Illinois Street, Chicago, Illinois.



Russian Asbestos Cement, Made by the Nickel Plate Stove Polish Company, Chicago, Illinois.

THE WEEK'S HARDWARE RECORD

Of Interest to Manufacturer, Jobber and Retailer

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 44 to 49 inclusive.

The Sterling Hardware Company, Hazard, Kentucky, capital \$200,000, will erect a plant at Hazard.

The Holly Hill Hardware Company, Holly Hill, South Carolina, has been incorporated by J. M. Russel with a capital of \$15,000.

The Bayard Hardware and Furniture Company, Bayard, West Virginia, has been incorporated with a capital of \$10,000, by J. A. Kimble.

The Allen-Corlett Hardware Sales Company, Oklahoma City, Oklahoma, has been incorporated with a capital of \$10,000, by George W. Corlett.

The Southwest Hardware and Supply Company, Dante, Virginia, has been incorporated with a capital of \$150,000, by L. C. McNeer and Tom Harding.

The Springs Distributing Company, Heath Springs, South Carolina, has organized to deal in hardware with a capital of \$100,000, by Leroy Springs, Robert B. Mackey, Boyd B. Horton and Edward F. Hammond.

ALLAN J. COLEMAN IS ELECTED AS PRESIDENT OF THE HARDWARE CLUB OF CHICAGO.

A just appreciation of his indefatigable labors in behalf of the organization was shown to Allan J. Coleman at the meeting of the new Board of Governors of the Hardware Club of Chicago, Thursday evening, October 30, 1919, when he was chosen as president of the Club for the ensuing term. There may be considerable truth in the saying that a man is judged as to his value by the number of enemies which he has made. But the reverse of this adage is the more illuminating measure of the character of Allan J. Coleman. His worth is more satisfactorily gaged by the extraordinary number of friends he has made. His election to the first executive position of the Hardware Club of Chicago is a tribute to his unfailing cheerfulness, his friendly disposition, and his organizing ability. The roster of the new officers of the Hardware Club of Chicago, chosen at the same time, is as follows:

President: ALLAN J. COLEMAN;
Vice-President: WILLIAM D. LEWIS;
Secretary: WILLIAM S. KENNEDY;
Treasurer: JOHN PATTEN.

The newly elected Vice-President, William D. Lewis, was made Chairman of the House Committee. By reason of their especial fitness for the work, H. A. Squibbs and J. S. Kandy were placed in charge of the Entertainment and Reception Committee.

For the purpose of achieving greater efficiency in the work of obtaining new members for the Hardware Club of Chicago, the Membership Campaign has been organized in divisions corresponding to the main sections of the hardware trade.

The Non-Resident Membership Committee is under the direction of Barney Moore.

A. H. Vayo is Chairman of the Committee to get new members in the Automobile Accessories Trade.

The steel industries are to be thoroughly canvassed for new members by a committee under the chairmanship of H. A. Squibbs.

Charlie Meacham is the Chairman of the Membership Committee which is to carry on its labors among the manufacturers of Washing and Iron Machines. Cooperating with him as Associate Chairman is H. G. Grosse.

Andy Hoffman, William S. Kennedy, and John Patten will work among the hardware manufacturers and the wholesale and retail hardware dealers for new members.

The plating industries and small specialties manufacturers will be solicited for new members by a committee of which Elmer Mercell is Chairman.

J. S. Kandy is Chairman of the Membership Committee for the electrical industries.

H. H. Hopkins is Chairman of the Membership Committee for the Paper and Roofing Industries.

The General Chairman of the Membership Campaign is the retiring president, A. V. Martin.

The matter of politics and taxes is placed under the able and experienced managership of Henry Stuckart, veteran hardware dealer and Treasurer of the City of Chicago.

In connection with the vigorous campaign for membership, many attractive features have been planned for the program of the Hardware Club of Chicago. Tuesday, November 11, 1919, a talk will be given during the noon luncheon hour in the rooms of the Hardware Club of Chicago by Mrs. Laura Hoffman, General Sales Counsel for the Bush Terminal Sales Corporation, New York City.

The entertainment activities for the season of 1919-1920 will begin Saturday, November 22, 1919, with a dinner in the rooms of the Club followed by dancing, and card playing, for all the members and their guests. This function is to be under the personal direction of the Entertainment and Reception Committee.

BUILDS AN ADDITION TO ITS PLANT.

The unceasing vigilance exercised by the Atlantic Stamping Company of Rochester, New York, in the maintenance of high standards of quality for its products has resulted in such a continuous volume of orders that its present manufacturing facilities have

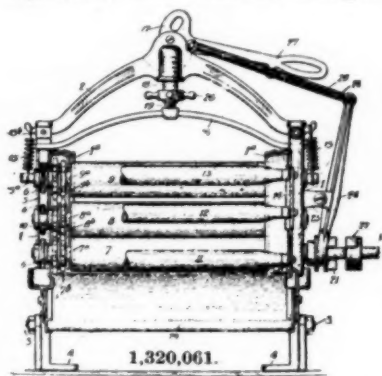
proved inadequate to the requirements of its business. An enlargement of its plant has, therefore, become imperative. Consequently, the Atlantic Stamping Company is building a two story addition, 80x200 feet, in order to afford room for the expansion of its business.

R. H. TREMAN GIVES UP POSITION AS DEPUTY GOVERNOR OF NEW YORK FEDERAL RESERVE BANK.

Robert H. Treman of Treman, King and Company, Ithaca, New York, President National Hardware Association of the United States, has resigned from active service as Senior Deputy Governor of the New York Federal Reserve Bank, though he will continue as a director until the expiration of his term at the end of next year. During much of the war period, when the New York Federal Reserve Bank played a highly important part in the Government's financial activities, he virtually was at the head of the bank, and by the manner in which he handled its affairs won for himself a distinguished place among leading financiers. In addition to the general duties of the office, he assumed from the outset the responsibility for the distribution of United States certificates of indebtedness in which the Second Federal Reserve District led all others, both as to volume purchased and the effectiveness of the organization through which the sales were consummated. He is widely known in the wholesale hardware trade, and has done much for its development and prosperity.

PATENTS A CLOTHES-WRINGER.

John D. A. Johnson, Muskegon, Michigan, has obtained United States patent rights, under number 1,320,061, for a clothes-wringer described as follows:



In a wringer, and in combination with a driven shaft equipped with a clutch member plurality of wringing rolls, one of said rolls having a shaft equipped with a complementary clutch members, means for yieldingly pressing said rolls together, said means, including an operating handle yieldingly connected with one of said clutch members.

SHOWS HARDWARE SALESMEN WAY TO BETTER SALES ABILITY.

Advice is often proffered but seldom followed. Yet good advice is always wanted. Suggestions that better one's skill repay themselves in dollars and cents. Because of the great mass of advice disseminated here and there it requires tact to pick suggestions which are really of value. Suggestions of value to the hardware salesman which have been gleaned from experience are

herewith given. That strict compliance with them will increase selling power is self-evident:

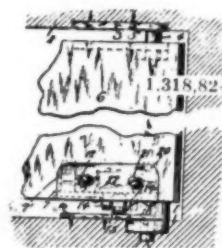
1. Respect your store and your employer, for their importance is your importance.
2. Do your week's work in one week's time and don't try to stretch Sunday out to a loafing Monday.
3. Call on the Store Manager oftener than on the Cashier, because your money is where you make it, not where you find it.
4. Don't lay down on your trade.
5. Don't substitute and don't try to sell anything that's "just as good."
6. Don't knock another salesman; it merely makes him knock you.
7. Tell the truth about your stock—to your Boss as well as to your customers.
8. Don't steal the store's time. You might as well steal its money.
9. If you can't see opportunities, make them.
10. Sell goods.

There is only one thing to add to this review of retail hardware salesmanship:

It is a good job, even when it seems like a bad one. All you need do is keep a tight grip on it, and keep on gripping.

GETS PATENT FOR DOOR HINGE.

Alphonse Alary, St. Casimir, Quebec, Canada, has been granted United States patent rights, under number 1,318,824, for a door hinge, described in the following:



The combination with a door casing and a swinging door arranged therein, of a plate carried by the lower edge of said door, said plate having a lug projection formed with one end thereof and extending within said door, a depending pin having one end extending through the opposite end of said plate and within said door, a pair of side plates secured to the opposite faces of the door and having their edges resting upon the opposite sides of said plate, lugs depending from said plate, a roller journaled within said lugs and extending transversely of said plate, a shoe secured within said door casing, a flange formed with said shoe, the upper edge of said flange having a pair of diametrically opposite recesses therein, said flange being cut away to form a pair of inclines having their highest points terminating adjacent said recesses and the lowest ends of said inclines terminating at a point upon said shoe at right angles to said recesses, said roller adapted to ride upon said inclines and be seated within said recesses substantially as and for the purpose specified.

LUCK IS NOTHING BUT HARD WORK.

The best known definition of luck is the following: Luck is the getting up at 6:00 a. m. and plugging away until 6:00 p. m. It's hard. Not necessarily hard luck. But it brings the results usually attributed to that mysterious thing—rainbow's end—luck.

WINDOW DISPLAY COMPETITION IS MEANS OF COMPARING WAYS OF IMPRESSING MEMORY.

Some strange findings were obtained from investigations made by various scientists of the mind in relation to memory. These investigations, though independently conducted, agree to a great extent. It was found that the brain retains a fair résumé of an occurrence or scene for one, two, or three minutes afterward. In the first thirty to forty seconds, a very vivid reproduction of the happening is present in the mind. But after three or four minutes the image begins fast to fade. In twenty minutes, more is forgotten of a scene or occurrence than in the next thirty days. After that time, the perception begins gradually to disappear; and if not of extreme import it will be entirely forgotten. When something is remembered, only salient features can be recollected.

When arranging a window display the vicissitudes of memory should be considered. Beside gaining attention of pedestrians passing the window, the purpose should be to create a lasting impression upon their memories. Too many placards may confuse the mental perception of the message they wish to convey. Too elaborate decoration tends to leave in the mind of the observer only the beauty of the display and not the utility or quality of the line of goods portrayed. Multiplicity of wares forms too vast a display to effect a lasting impression. The entire display should be arranged so that definite articles will impress the mind of onlookers. Emphasis should be placed on individual wares. Attraction should be centered upon some few points. Some by study, others by experience, learn to arrange window displays to produce a lasting thought of the ware demonstrated. Many are the ways of doing this as shown by the examples submitted in the AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. This competition is open to all merchants engaged in the hardware and allied trades and their clerks. Rules governing participation in this contest are given herewith:

Award of Prizes.

The prizes will be awarded as follows:

First prize, \$50.00 in cash, for the best photograph and description received of window display of hardware or kindred lines;

Second prize, \$25.00 in cash, for the photograph and description second in merit;

Third prize, \$15.00 in cash, for the photograph and description third in order of excellence;

Fourth prize, \$10.00 in cash, for the photograph and description fourth in degree of worthiness.

Conditions of Competition.

The conditions of the competition are as follows:

The photograph must be accompanied by descriptions of how the window displays were arranged and the materials used. The description is important and hence should be adequate. These photographs and descriptions may be sent by mail or express, charges prepaid, and must reach this office not later than February 2, 1920. Address all photographs and descrip-

tions to AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition, 620 South Michigan Avenue, Chicago, Illinois.

Each photograph and description must be signed by a fictitious name or device and the same name or device must be put in a sealed envelope containing the real name and address of the contestant. This sealed envelope is to be enclosed with the photograph. Contestants are permitted to enter as many photographs of displays as they please.

A Competition Committee of three will be appointed. One of them will be an expert window dresser and one an experienced hardware man. This Committee will pass upon the merits of all photographs and descriptions received, without knowing the names or addresses of the senders, and will decide the winners of the Competition.

AMERICAN ARTISAN AND HARDWARE RECORD reserves the right to publish all photographs and descriptions submitted.

• DEMONSTRATION IS NATURAL AID.

No amount of words can take the place of a picture. The ear, because of the involved process required to interpret language into actual things, is not as readily accessible as the eye. A baby can comprehend the working of a toy. Demonstration accomplishes this. Savages are awed by the demonstration of a gun. A description of its use in their own language would fall far off the mark. The germ of truth contained in all demonstrations is, "Seeing is believing." Salesmen are known to have achieved results, when others have failed, by clever manipulation of the art of demonstrating. A demonstration will attract almost all within its range. Natural curiosity is the reason. When telling the advantage of a device, it will not do merely to describe it and stand idly by. Demonstrate with the instrument itself. Keep it in constant motion. Have the prospective purchaser operate it. When selling a toy to a parent who has brought his child with him, demonstrate the toy to the child. Don't just talk of its durability to the parent. Real, live things are what everybody wants. Actualities, facts, demonstrations, are the greatest aids in selling. Utilize them.

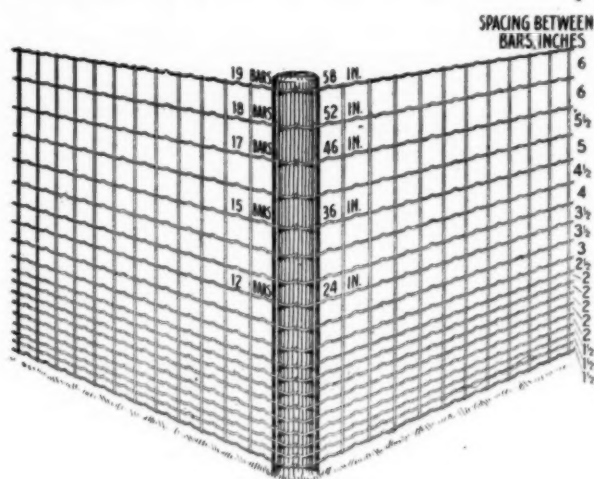
HAS EVERYTHING IN HARDWARE.

To know that there is a wholesale hardware dealer in your territory who can supply you with anything in hardware is a great satisfaction. Especially when this wholesaler tells you that he will serve you to your best advantage. The uninterrupted process of distribution on the part of the retailer is necessary for the facile distribution of commodities for the wholesaler. Bullard and Gormley Company, 173-175 North State Street, Chicago, Illinois, are well aware of the difficulties met with in the retailers' end of the business and go to great length to give the utmost satisfaction and service to retail hardware dealers. They urge hardware dealers to look over their stock and see what is lacking. Replenish completely so that you may be in a position to sell everyone who enters

your store; so that you will not have to let anyone out because your stock is meager, they say. The Bullard and Gormley Company will satisfactorily fill all orders for garden tools, general and builders' hardware, mechanics' tools, cutlery, guns, ammunition, sporting goods and fishing tackle. They invite inquiries for information pertaining to their goods and service. Communications should be addressed to the Bullard and Gormley Company, 173-175 North State Street, Chicago, Illinois.

FENCING IS ELECTRICALLY WELDED.

The Pittsburgh Steel Company of Pittsburgh, Pennsylvania, makes the electrically welded "Pittsburgh Perfect" wire fencing for poultry, garden, farm, ranch and lawn purposes. The Company has been experimenting for many years and is now able to produce this fencing in particular designs, sizes of mesh and heights suited exactly to all special fencing requirements. The most distinctive feature of the



Poultry and Garden Fencing, Made by the Pittsburgh Steel Company, Pittsburgh, Pennsylvania.

"Pittsburgh Perfect" fencing is the electrically welded joint. At every contact point the wires are welded together by electricity, inseparably joining them into practically a one-piece steel fabric of unified strength. It is said that all shocks and strains to which this fence may be subjected, are as a result resisted by its whole surface. The tension curves which are placed on all line wires between the upright stays take care of the natural expansion and contraction of the erected fencing caused by extremes of heat and cold. It also keeps the fence taut, trim and effective. For further particulars, address the Pittsburgh Steel Company, Pittsburgh, Pennsylvania.

GIVES CLERKS HELPFUL ADVICE IN GOOD SALESMANSHIP.

Sales clerks are a part and parcel of the sturdy growth of a business. They are the connecting links between the business and the trade. In this capacity they form a vital factor in establishing a satisfied patronage. It takes training and brains to do this. The metal of true character is often bared. Herewith are given four "don'ts" which can be used to gainful

advantage by everyone engaged in selling to the trade:

First. Don't lose patience with a customer. Should a purchaser consume an undue portion of your valuable time selecting a pound of nails or in buying a mousetrap, keep your temper. Remember a betrayal of impatience in your voice may mean the loss of a good customer. It is, indeed, a hard task. However, it builds tact, self-control, and character. A pleased customer is a source of future business. Clerks owe this training to themselves as a practical business education. Successful business men are all good salesmen.

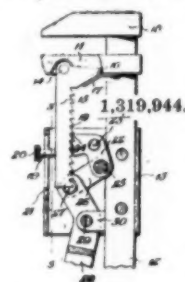
Second. Don't correct a customer's mistakes in pronunciation. When an article is asked for by a mispronounced trade-name do not call back by correctly pronouncing the name of the article. This indicates bad manners, as well as poor salesmanship. When describing the goods whose name has been wrongly pronounced use the customer's pronunciation of the trade-name.

Third. Don't detract your attention from the customer during his examination of an article. Tapping your foot impatiently or looking off in the distance disturbs the customer's attention to the wares. Do your yawning when you have landed the sale—if you must yawn at all during business hours. Selling to a doubtful customer requires the most tactful salesmanship.

Fourth. Don't contradict a customer. When you are absolutely sure you are right and the customer persistently maintains he's right, be patient. Self-control is here tested to its utmost. Let the prospective purchaser argue. Agree with his argument. When he has fully expressed his side of the question begin to interest him in the good qualities of the commodity, forgetting the controversy. Diplomatically present your side of the argument in the selling talk. Don't flagrantly contradict in any circumstances.

SECURES PATENT FOR WRENCH.

Under numbers 1,319,944 and 1,319,946, United States patent rights have been granted to William Louis Bessolo, San Diego, California, for two quick-adjustable wrenches, described herewith:



Number 1,319,944: A wrench comprising a pair of crossed pivoted jaws having toothed inner concave faces opposing one another, a shank with which one of said jaws is rigid, said rigid jaw having a slot adjacent to its juncture with the said shank and in which a portion of the other jaw is movable, a pivot connecting the said jaws and upon which the last mentioned jaw is movable, said movable jaw terminating in a toothed extremity at a point beyond the fixed jaw, a transverse jaw actuating arm also extending through the slot of the fixed jaw and having a curved toothed end engaging the toothed extremity of the movable jaw, said fixed shank having a laterally projecting lug intermediate its ends, and a movable shank extending along the fixed shank and fulcrumed upon its said lug, one end of said movable shank being pivotally connected

to the other end of said jaw actuating member and carrying a spring engaging the jaw actuating member normally to hold the same in engagement with the movable jaw.



Number 1,319,946: A wrench comprising a fixed jaw, a fixed shank upon which said jaw is rigid, a movable jaw opposing the fixed jaw and having a sliding connection with the said rigid shank, a shank extending from the movable jaw, a rocking lever fulcrumed in connection with the fixed shank and adjustably engaging the said movable shank to shift the latter and the movable jaw in the direction of the length of the rigid shank, and into and out of connection with which said movable shank is manually shiftable for adjusting the movable jaw, and a level fulcrumed upon and extending along the rigid shank and having a connection at one end with said first named lever.

GETS BOYS' AID IN SELLING.

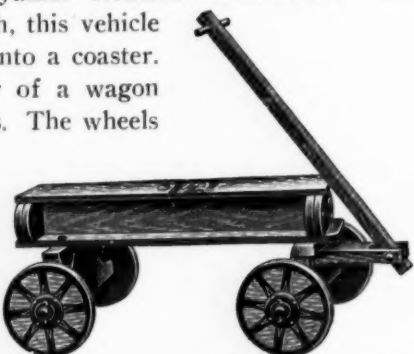
Boys are born salesmen. Their selling ability is demonstrated in every country in the world. You enlist all the boys in your vicinity as solicitors when you display its goods, states the Buffalo Sled Company, North Tonawanda, New York.

The youngsters can recognize value. To them value is that which gives satisfaction, pleasure, and good service.

Materials of known durability are used in the construction of the Junior Roadster Convertible. As illustrated herewith, this vehicle can be converted into a coaster. Most of the wear of a wagon falls on the wheels. The wheels on this make of wagons are of standard automobile type. They are equipped with Bessemer steel bearings. Cotter pins are used instead of nuts. This is an added feature of durability. Beautifully finished, they have an attractive appearance, which, unlike the ordinary make of wagons, wears a long time. Information concerning a cooperative advertising campaign with retailers of this line of goods, and other details incidental to the handling of these wagons, will be furnished upon inquiry to the Buffalo Sled Company, North Tonawanda, New York.



Junior Roadster Convertible, Made by the Buffalo Sled Company, North Tonawanda, New York.



Showing Box of Junior Roadster Changed to Coaster.

Don't be so foolish as to be afraid to ask a customer who is behind to settle up. You're entitled to the money. Go and get it.

BUSINESS EXPERT DISCOURSES ON PRINCIPLES OF SALESMANSHIP.

Declaring that the flypaper stage of business is passed, Frank Stockdale, the noted merchandising expert, points out the necessity of devising new plans for holding the good will and trade of customers. In a lecture recently delivered to the Saskatchewan Retail Merchants' Association in Canada he emphasized the need of training in the principles and practice of salesmanship, as follows:

"If soldiers were going into battle against soldiers who were not trained they would not need to be trained, but your salespeople are in direct competition with the best in the country. The customers who come into your store are coming direct from dealings with trained salespeople in other stores, and they compare your salesmen with the trained and the best ones who have waited on them. You are being compared with the best, that is the reason the customer is particular. Some say customers are getting very particular and harder to please. Some merchants say salespeople are not as good as they used to be. I believe salespeople are better than they were, but their job is a great deal bigger because their competition with trained people is so great. You perhaps lose more customers because of the service your salespeople render than from any other two causes.

"Salesmanship is a big job. If an electrician makes a mistake he blames it on anything which is not understood generally; if the doctor makes a mistake the customer dies, and the blame is laid at the door of some unknown disease, but if the salesman makes a mistake he is the big loser.

"Negative salesmanship is where the salesman does not sell as much to a customer as he or she intended to buy when entering the store," continued Mr. Stockdale. "The people who work in retail stores are divided into two classes, store waiters and salespeople.

"Clerks, waiters and bar-tenders were listed together as non-essential occupations for the purposes of the draft system in raising the United States army. While this classification is in part insulting to the retailers, yet it is unfortunately only too true, in a great many cases."

Mr. Stockdale spoke of the type of merchant who thinks he is performing a great feat of salesmanship when, owing to his failure to stock a particular line of goods for which the customer asks, he is able to sell other goods to the customer in their place. Regarding this practice Mr. Stockdale pointed to the dangers of substitution.

"What is the thing you sell in your store?" asked Mr. Stockdale. The correct answer was "service." "The thing the customer wants to have is satisfaction. Service is necessary to satisfaction. You may render service but if it is not of the right kind there will not be satisfaction.

"Our mail order houses in the United States are big and powerful as yours are. The head of one of the large mail order firms was asked the reason for the success of that particular business. His business has exceeded the record of \$1,000,000 of orders in one day. His answer was as follows: "The success of

this institution is built on the fact that we endeavor always to view the transaction from both sides of the counter."

"Your customer lays down his money on your counter for satisfaction," added Mr. Stockdale. "The home plate of every sale is satisfaction, and if your service does not take you around to the home plate you will be left on the bases and will not score. Satisfaction consists in bringing the right goods and the right people together. You must know the goods and know the people. The first job of a salesman is to know the goods, but after that he must study the people."

At this point Mr. Stockdale referred to the assertion, "The customer is always right," and issued a warning that if the customers were not always right they soon became other merchants' customers. "We have to acknowledge that some of them tell the plainest lies. If you will look for honest people you will find, however, that the proportion of dishonest people is very small and very few will come back time after time and try to get the better of you. Give this class of customer plenty of rope and he will be shamed."

"Don't argue with your customers. You will never sell anything through argument. Real salesmanship avoids arguments. Do not try to convince the customer or a controversy is bound to ensue. The salesman who starts in to contradict the customer makes a big mistake. I have observed a lot of salesmen who get overconfident in sizing up a customer, and I find that many of this type are missing many sales. It is difficult to sell one article after having gone the limit in sales talk on another article, and this is the danger if you make a mistake in sizing up what the customer wants before you know."

"When you try to sell a customer something he does not want he forgets to come back to your store again. Be careful of over-insistence. Lead the customer instead of trying to drive. We are apt to size the customer up according to our standards instead of according to his standards."

In referring to the customer who comes into the store and says that he or she is "just looking," Mr. Stockdale gave the following illustration:

"A Woodstock, Ontario, Canada, merchant told of a lady who came into his store to look at certain goods which she was thinking of buying in the fall—some few months later. The salesman explained that they would have some better lines in at that time, and suggested that she delay looking until the fall, and then visit the store. The lady in question went to another store in town, and by the exertion of salesmanship was induced to buy goods on the spot."

Mr. Stockdale gave another illustration of how some merchants take much for granted and make a mistake in sizing up customers. He referred to the traveling salesman, who often makes purchases from merchants whom he usually visits in a business way. The point was emphasized that many merchants mistake good customers for salesmen, and do not give them even usual attention.

"The merchant who will not pay the greatest attention to the traveling salesman reaps his own reward," added Mr. Stockdale.

"Merchants should also give customers the same attention when they do not buy as when they do make a purchase." The 5, 10 and 15c store is teaching the people to shop. We are developing a nation of looker-shoppers. It is there they are getting their education.

"The customer who comes in to buy a 10c article should be given the same attention as the one who comes in to buy a \$10 article. Take care of the people who come in to look. Don't let any lookers come in to your store, as far as your treatment is concerned."

"The attention you give to Mrs. Brown has a greater influence on your store than you imagine. Mrs. Brown takes a lot of your time and buys very little, and she is hard to wait on. When you take this attitude towards customers you are making the mistake of your merchandising life. You may call this customer what you please, but Mrs. Brown corresponds to the baseball fan. She is the store fan—what would baseball be without the fan? Mrs. Brown knows more about the merchandise than the clerk behind the counter. She asks questions which are hard to answer. Mrs. Brown belongs to all the clubs in the town and attends them regularly. Don't forget the stores are well discussed at these meetings. The reputation of your store is made or marred right there. Mrs. Brown is sending customers to your store or away from it. Get Mrs. Brown boosting for your store."

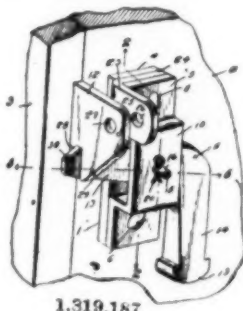
"A satisfied customer is the greatest advertisement. Mrs. Brown is satisfied or is a dissatisfied customer who gives much of her time giving word of mouth advertising."

"Whenever you think of salesmanship you think of certain clerks who are born and not trained. If you have the right foundation salesmen can be developed through experience, and if you do not have the right foundation you can not develop a salesman. The study of the science of salesmanship is a good thing."

"The person who stands behind the counter today and succeeds is the person who really wants to serve the customer, the salesman who has the spirit of service. How many can say that their customers feel you like to serve them? If they feel that way they will come back to your store, but you must have the service spirit in your salesmanship."

ACQUIRES PATENT FOR DOOR-LATCH.

Under number 1,319,187 United States Patent rights have been conceded to Charles E. Summers, Mannville, Alberta, Canada, for a door-latch described as follows:



1,319,187.

In a device of the class described, the combination with a door and frame, of a latch therefor, including a housing secured to the door, a shaft extending through the housing and door and rotatably carried thereby, a handle formed on one end of the shaft, a locking lever carried by the shaft and having a downwardly extending weighted manipulating handle, the opposite end of the lever at its upper surface thereof beveled downwardly and provided

with a groove, and an outwardly extending plate carried by the door frame having the forward edge thereof beveled downwardly and the lower edge thereof provided with an inwardly extending slot to receive the lever as and for the purpose specified.

COOPERATE WITH THE SALESMEN.

Competition is the struggle for existence between different groups. Cooperation is the law of life between members of the same group. Coöperate with all concerned in your line of business. Coöperate with the salesmen of manufacturers because he is necessarily a member of your group. He is instructed to coöperate with you. Why not coöperate with him?

OBITUARY.

Frederick Orgill.

When a good man passes away, one's first thought is of the loss sustained by his friends and relatives. If the impressions caused by such a sorrow were to be confined to a contemplation of the grief and distress which it causes there would be no remedy for the consequent state of mind. Fortunately, however, there is solace in the thought of compensation for the loss. The positive values added to other lives by the helpful words and pleasant deeds of the man who leaves his friends and relatives to embark on the final journey



into the Great Beyond are a heritage most precious to those he leaves behind him. There is a measure of consolation, therefore, in this view of the matter as applied to the departure from this life of Frederick Orgill, President of Orgill Brothers, Memphis, Tennessee, who died suddenly at his residence, 1544 Carr Avenue, in that city, October 31, 1919.

Frederick Orgill was born November 2, 1859. As a young man he entered the employ of Wiebusch and Hilger Hardware Company, New York City, and continued with that firm until 1882, when he went to Mem-

phis, Tennessee, and became identified with Orgill Brothers and Company. The Orgill name in Memphis dates back to the year 1847, when the present business was established. In 1898 the company was incorporated and he became its Vice-President, succeeding to the presidency in 1905 upon the death of Edmund Orgill. So comprehensive was his knowledge of the manufacture and distribution of hardware that he became recognized as one of the most important and influential men in the hardware trade of the South. His advice and assistance was constantly sought in the councils of the Southern Hardware Jobbers' Association. He served on some of its most important committees. In 1915 he was elected Vice-President of that Association; and in 1916 was honored by the unanimous vote of his fellow members with the presidency of the organization.

He was closely identified with the civic and commercial affairs of Memphis. In addition to his office of president of Orgill Brothers, he was also President of the Hernando Insurance Company. He was active in the Memphis Chamber of Commerce and the Merchants' Exchange. He held membership in the Country Club of Memphis and the Tennessee Club. He was a vestryman of Calvary Church.

He is survived by Annie D. Orgill, his wife, and three sons, all of whom reside in Memphis, Tennessee. One of the sons, Frederick Orgill, Jr., is President of the DeSoto Hardware Company. Two other sons, Arthur Reginald Orgill, and Kenneth Orgill, are connected with the firm of Orgill Brothers of Memphis. Mrs. Lucy Orgill, his mother, is still alive in Memphis at the advanced age of ninety years. Two of his brothers are living, namely, William and Joseph, who are members of the firm of Orgill Brothers. A sister, Mrs. S. R. Montgomery, of Memphis, also survives him. The funeral services were conducted by Doctor Walter D. Buckner, Rector of Calvary Episcopal Church, Sunday afternoon, November 2nd, at the residence of the deceased. He was buried in Forest Hill cemetery.

Frederick W. Wallace.

While still in the prime of his powers and usefulness, Frederick W. Wallace, General Manager and Treasurer of the W. A. Clark Wire Company, of Elizabeth, New Jersey, passed away at his home in Plainfield, New Jersey, October 30th, 1919, at the age of fifty-five years. He was graduated from Yale University in the class of 1888, and kept up his interests in University affairs through his membership in the Scroll and Keys fraternity. To a wide culture and knowledge of business, he added the fascination of a genial disposition and a friendliness which endeared him to his associates. He is survived by his wife, Grace Seccomb Wallace.

John J. Powers.

One of the oldest hardware dealers in Brooklyn, New York, John J. Powers, died Monday, October 27, 1919, at his home in that city, 163 Milton Street. He was sixty-nine years of age, and was widely known throughout the local trade, having established a reputation for fair dealing, courtesy, unfailing service and a goodness of nature which attracted and held friends and customers alike.

OPPORTUNITIES FOR FOREIGN TRADE PRESENTED BY BUREAU OF FOREIGN AND DOMESTIC COMMERCE.

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

31112.—A merchant in South Africa desires to secure an agency for the sale of hardware, automobile accessories, and general merchandise. References.

31115.—A merchant in Italy desires to secure the agency for the sale of tools, metals, and mechanical goods in general. Correspondence may be in English. Reference.

31116.—An agency is desired by a man in Italy for the sale of motorcycles, and sporting goods. Quotations should be given c. i. f. Italian port. Payment by sight draft against documents. Correspondence should be in Italian. Reference.

31117.—A firm in France desires to secure an agency for the sale of agricultural implements. Correspondence may be in English. Reference.

31118.—An engineer in England desires to secure the sole agency for Midland Counties of England for the sale of best-quality wood and iron screws, and also engineers' bright bolts and nuts. Reference.

31119.—A manufacturer in Argentina desires to secure agencies for the sale of general merchandise, but especially hardware and construction materials. Correspondence may be in English. References.

31131.—Representation of American firms is desired by a company in France for the sale of hardware, especially tools and articles used in the locksmith trade. Correspondence may be in English.

31132.—Exclusive agencies for the Republics of Santo Domingo and Haiti are desired by a firm in Dominican Republic for the sale of corrugated and plain galvanized sheets, and barbed wire. Correspondence should be accompanied by samples when possible. Catalogues and advertising matter should be in the Spanish or French language. References.

31143.—A commercial agent in France desires to secure an agency for the sale of bicycles and bicycle supplies, tires, etc. Correspondence should be in French.

31146.—An electrical-goods merchant in Spain desires to purchase and secure an agency for the sale of copper wires, and copper in bars and sheets. Quotations should be given c. i. f. Spanish port. Payment, cash against documents. Correspondence may be in English. References.

31149.—An agency is desired by a firm in Italy for the sale of hardware, tools, etc. Quotations should be given c. i. f. Genoa. Payment against documents. Correspondence should be in Italian. References.

31153.—An agency is desired by a man in Ireland for the sale of cutlery, etc. Quotations should be given f. o. b. destination. Reference.

31154.—A commercial agent in Scotland desires to secure an agency for the sale of household hardware, and hardware or woodware specialties. Quotations should be given c. i. f. Scottish port. Terms, payment by 10 days' sight draft. Reference.

31158.—A commercial agent from Australia desires to purchase and secure agencies for the sale of hardware, electrical goods, tools, stoves and pumps. References.

31159.—An importer in Italy desires to purchase or secure an agency for motorcycles, farm tractors and agricultural implements. Correspondence should be in Italian. References.

COMING CONVENTIONS.

Automobile Accessories Branch of the National Hardware Association, Hotel Sherman, Chicago, Illinois, December 8 and 9, 1919. A. H. Nichols, Chairman, Detroit, Michigan.

Oklahoma Hardware and Implement Association, Oklahoma City, Oklahoma, December 9, 10, and 11, 1919. W. B. Porch, Secretary, Oklahoma City, Oklahoma.

Pacific Northwest Hardware and Implement Association, Davenport Hotel, Spokane, Washington, January 20, 21, 22 and 23, 1920. E. E. Lucas, Secretary, Hutton Building, Spokane, Washington.

Indiana Retail Hardware Association, Athenaeum Hall, Indianapolis, Indiana, January 27, 28, 29, and 30, 1920. Exhibit in same hall. G. F. Sheely, Secretary, Argos, Indiana.

Oregon Retail Hardware and Implement Dealers' Association, Imperial Hotel, Portland, Oregon, January 27, 28, 29 and 30, 1920. E. E. Lucas, Secretary, Hutton Building, Spokane, Washington.

Kentucky Hardware and Implement Dealers' Association, the Armory, Louisville, Kentucky, January 28, 29, 30, and 31, 1920. Hardware, Implement, and Vehicle exhibit. J. M. Stone, Secretary, Sturgis, Kentucky.

Nebraska Retail Hardware Association, Lincoln, Nebraska, February 3, 4, 5, 6, 1920. Nathan Roberts, Secretary, Lincoln, Nebraska.

Wisconsin Retail Hardware Association, Milwaukee, Wisconsin, February 4, 5, and 6, 1920. P. J. Jacobs, Secretary, Stevens Point, Wisconsin.

Iowa Retail Hardware Association, Auditorium, Des Moines, Iowa, February 10, 11, 12 and 13, 1920. A. R. Sale, Secretary, Mason City, Iowa.

Michigan Retail Hardware Association, Hotel Pantlind, Grand Rapids, Michigan, February 10, 11, 12 and 13, 1920. Exhibit in Furniture Exhibition Building. Arthur J. Scott, Secretary, Marine City, Michigan.

Pennsylvania and Atlantic Seaboard Hardware Association, Bellevue Stratford Hotel, Philadelphia, Pennsylvania, February 10, 11, 12, and 13, 1920. Exhibition in Philadelphia Commercial Museum. Sharon E. Jones, Secretary, 1314 Fulton Building, Pittsburgh, Pennsylvania.

North Dakota Retail Hardware Association, Grand Forks, North Dakota, February 11, 12 and 13, 1920. Hardware exhibit in Grand Forks Municipal Auditorium. C. N. Barnes, Secretary, Grand Forks, North Dakota.

Illinois Retail Hardware Association, Hotel Sherman, Chicago, Illinois, February 17, 18, and 19, 1920. Exhibit in connection. Leon D. Nish, Secretary, Elgin, Illinois.

Minnesota Retail Hardware Association, St. Paul Auditorium, St. Paul, Minnesota, February 17, 18, 19 and 20, 1920. H. O. Roberts, Secretary, 1030 Metropolitan Life Building, Minneapolis, Minnesota.

New York State Retail Hardware Association, Onondaga Hotel, Syracuse, New York, February 17, 18, 19 and 20, 1920. Exhibition in State Armory. John B. Foley, Secretary, 607 City Bank Building, New York City.

Missouri Retail Hardware Association, St. Joseph Auditorium, St. Joseph, Missouri, February 17, 18, and 19, 1920. F. X. Becherer, Secretary, 5136 North Broadway, St. Louis, Missouri.

New England Hardware Dealers' Association, Mechanics' Building, Boston, Massachusetts, February 23, 24, and 25, 1920. George A. Fiel, Secretary, 10 High Street, Boston, Massachusetts.

South Dakota Retail Hardware Association, Sioux Falls, South Dakota, February 24, 25, 26, and 27, 1920. Exhibit in connection. H. O. Roberts, Secretary, Metropolitan Life Building, Minneapolis, Minnesota.

Ohio Hardware Association, Hotel Gibson, Cincinnati, Ohio, February 24, 25, 26 and 27, 1920. James B. Carson, Secretary, Dayton, Ohio.

Stove Founders' National Defense Association, Boston, Massachusetts, May 11, 1920. R. W. Sloan, Secretary, 826 Connell Building, Scranton, Pennsylvania.

Old Guard Southern Hardware Salesmen's Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 12, 1920. R. P. Boyd, Secretary, Knoxville, Tennessee.

Southern Hardware Jobbers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, and 14, 1920. John Donnan, Secretary, Richmond, Virginia.

American Hardware Manufacturers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, and 14, 1920. F. D. Mitchell, Secretary, 4106 Woolworth Building, New York City.

National Association of Stove Manufacturers, Boston, Massachusetts, May 12 and 13, 1920. Robert S. Wood, Secretary, National State Bank Building, Troy, New York.

RETAIL HARDWARE DOINGS.

Kansas.

Buford Tutor has purchased the J. G. Adams hardware stock at Stockton from the trustee, J. C. Foster.

Missouri.

Mrs. W. R. Hawkins of South Greenfield purchased C. W. Rountree's interest in the Rountree and Hirst Hardware Company.

C. E. Puthuff has sold his implement business at Warsaw.

Ohio.

The City Hardware Company, Loraine, has erected a two-story brick building, where it will conduct its business.

Oklahoma.

The Barnett Hardware Company at Perry is selling its entire stock of hardware and will engage in the tractor and implement business only.

The Bruce Hardware Company has just purchased the Calmes-Tooker Hardware Company at Clinton.

Texas.

J. Tom Pickard, at Weatherford, has sold his interest in the Frantz-Pickard Hardware Company to J. W. Pond.

AUTOMOBILE ACCESSORIES SOLD BY HARDWARE DEALERS

The Liberty Auto Ignition Company, New York City, has been incorporated with \$150,000 capital, by H. Eissenbach, L. Kretzer and L. Baskin, 1121 Tinton Avenue.

The Ajax Auto Parts Company, Racine, Wisconsin, has let the contract for a one-story plant addition, 64x130 feet. Erection of another addition, 85x120 feet, is also contemplated.

APPARATUS FOR DISTILLING WATER CAN BE MADE AT LOW COST.

Often the dealer in automobile accessories is requested to supply distilled water for car batteries. While the profit from such business is not great, yet it is worth considering—particularly in the light of a service which helps maintain the good will of customers. An apparatus can be installed for distilling water at a low cost. It consists of three receptacles, one for ordinary water, one for condensing steam, and one for holding the distilled water. The first receptacle should be about a two-gallon size, which is supported over the gas burner, and water poured through an opening in the top, which should then be closed. From this receptacle the steam thus produced should be carried over through a $\frac{1}{2}$ -inch copper pipe which is coiled through the second receptacle, previously filled with cooling water, thereby creating a condensation. From this coil the condensed water flows by gravity into the third receptacle, of about two-gallon capacity, which serves as a collector of the distilled water. About eight feet of the $\frac{1}{2}$ -inch copper pipe should be quite enough for the coil.

In case the distilled water receptacle is securely connected to the condenser tubing, there should be a vent made in the side of the receptacle near the top, and a faucet at the bottom, which will permit air to flow into the receptacle as the water is drawn off through the faucet.

It might be found convenient to connect a glass gauge which will show how much water there is in the receptacle. Otherwise a two-gallon glass bottle may be used for receiving the condensed water. It may be found advisable to use thin sheet copper, or tin or galvanized sheet iron for making this still, and for one, two or three gallon sizes each the receptacles should be approximately 5x10, 6 $\frac{1}{2}$ x13 or 8x16 inches.

CAUSES LOSS OF POWER.

Much of the trouble and loss of power caused by oil leaking past the piston rings is due to rings improperly fitted more than to the rings themselves, and the fact should be remembered that a piston ring of good design, if poorly fitted, is as bad as a poor ring.

After removing the cylinder block, and the piston

from the connecting rods, the end clearance of the new ring should be fixed by placing the ring inside the cylinder and measuring the clearance at the ends. This may be anywhere from .007 to .0015, as it will vary in different engines, and the exact figure should be procured from the manufacturer or dealer. If the clearance is not enough, file the ring ends with a fine file.

The next step should be to prepare the piston for the rings, and bear in mind that the grooves must be true as well as clean; if the grooves are of one width in one place and another a few inches away it will be impossible to fit the rings correctly; they must be true in width and depth all the way around, and this requires accurate measurement. The grooves may be filed to make them true, or better yet, use a regrooving tool, thus doing away with uncertainty and trouble.

The rings should now be taken one at a time and fitted into their respective grooves, working from the bottom to the top of the piston. Take hold of a ring and place its back end in the groove and roll it around, which will enable you to determine whether the ring will go into the groove. It may be either too wide to go into the groove, so loose that play is felt, or just right. While the latter is the best, a ring too wide can easily be lapped down to the right width by rubbing the ring over emery cloth or emory dust and oil.

INCREASE LIFE OF STORAGE BATTERY BY TIMELY CARE.

The battery is the electrical bank account of a car. There is either a charge or discharge—deposit or withdrawal. Average batteries are of different sizes and have capacities from 60 ampere hours up. A pair of good headlights may discharge the battery at five amperes. This means they alone would exhaust a completely charged sixty-hour battery in twelve hours. In order to replace this current the car would have to be driven probably seven or eight hours when charging at the rate of ten amperes.

An average season's cranking will consume enough current to require from six to ten miles driving to replace it. An overdrawn bank account may cause mental discomfort. An overdrawn battery account is apt to cause discomfort—both mental and physical. The battery is liable to be ruined beyond salvation.

The liquid (electrolyte) in a fully charged battery must cover the plates. Offer the battery a drink at least once in two weeks. Distilled water is best. A little care will increase the life of the battery and save constant tampering. Have your battery inspected now and then. There may be reparable defects not apparent, which, if left alone, will develop into ruinous channels.

ADVERTISING CRITICISM AND COMMENT

Helpful Hints for the Advertisement Writer

A distinctive advertisement is that of Willard's Hardware Store, reproduced herewith from the *Worcester County Gazette*, Worcester, Massachusetts. It possesses the attraction which comes from the striking contrast of illustrations and generous area of

supplies. The average customer imagines that prices are always lower in a store which does a big volume of business and which, therefore, can give its patrons the advantage of buying in carload lots. He is likely to be favorably disposed toward the Settergren Hardware Company when he reads the announcement in the *Baraboo Republic*, Baraboo, Wisconsin. He may be somewhat disappointed at the omission of specific

We Sell Simonds Saws

THE QUALITY GOODS
One Man Cross Cuts



3 1/4 ft. \$3.50 4 1/2 ft. \$4.50
4 ft. \$4.00 5 ft. \$5.00

For the Wood Pile.

Simonds Buck Saws are made right for this work. Five grades to choose from—
\$1.75 to \$2.25

Carpenters

If you are using Simonds Saws we know that you are satisfied. If you have not used them we can show you why they are the best.

Rubbish Burners

For leaves
and papers.
The H. & C.
improved.



3 Sizes—
\$4.00,
\$5.50,
\$8.50

WILLARD'S Hardware Store
529 MAIN STREET
Opposite Chatham

white space. The layout is neat and effective. Prices are frankly set forth in black face type and no doubt is left in the minds of prospective buyers as to this highly important phase of the commodities listed in the advertisement.

* * *

The receipt of a carload of "American" woven wire fence is a bit of news worth featuring in an advertisement because it conveys the suggestion of ample

Just Received

A carload of "American"
Woven Wire Fence

Please call and get our price before you buy
We can save you money

Bee Supplies

We have a full line of Bee supplies—Bee Hives, Sections, Brood and Super Foundation, Brood Frames, Bee Smokers, Bee Veils.

Do not send off for this material. We can make you the same price and save you freight.

Settergren Hdw. Co.

price quotations in the advertisement, but he may respond to the invitation: "Please call and get our price before you buy. We can save you money." It is a mooted question whether an invitation of this sort is as potent in bringing people to the store as a frank statement of prices would be. Without directly mentioning mail order houses, Settergren Hardware Company announces its readiness to meet their quotations on Bee supplies and to save the customer the cost of freight into the bargain. This offer is good advertising and deserves to be imitated by retailers everywhere.

* * *

CAN EMPLOY FORCE OF SOLICITORS.

You can employ a complete force of solicitors. No, not men—words. They work night and day, rain or shine. They are not impolite. Never do they encroach upon anyone's time. They do not make themselves known unless bidden. Their field of activity depends upon the magazine or paper in which they appear.

HEATING AND VENTILATING

WARNS OF THE DANGER OF DRAFTS AND DRY ATMOSPHERE IN THE PRODUCTION OF COLDS.

Inconveniences are signals of distress. They are impressions upon the nerves warning the brain of some imminent danger. They should be regarded. A chill is a warning of an on-coming cold. Some interesting facts are set forth in an article on the prevention of colds sent out by the Department of Hygiene and Public Health of the University of Illinois. The following extract pertaining to predisposing factors in colds is especially interesting to those in the warm air heater business:

"Improper food, fatigue, loss of sleep, exposure to cold and wet, drafts and dry or dusty atmospheres are factors depressing the vitality and are predisposing to colds. A dry atmosphere which may often be found in dwellings is harmful to the mucous membranes of the upper air passages. The drying of the membranes caused by evaporation due to the inhaling of too dry air leaves the membranes unprotected and the first irritant that attacks them may cause an inflammation. It is necessary, therefore, to provide proper humidity in all dwellings and public buildings."

It can be seen from this that the humidity of the atmosphere is one of the most important factors to be guarded in avoiding colds.

Drafts in winter are mostly the result of efforts to bring fresh air into a room artificially heated. If there is no means of warming the air before admitting it into the dwelling, the possibility of avoiding drafts is very small. The desirability of a system of heating which does away with the danger of drafts and at the same time insures a sufficient supply of warm air, properly humidified, can be seen from the following paragraph of the above article:

"Acute congestion and more or less nasal secretion may be caused by drafts or currents of cold air, causing chilling of some uncovered surface of the body, especially if the person is overheated or is perspiring from exertion. Such congestion forms splendid soil for the development of germs. A draft in this manner may aid germs in producing colds."

DESCRIBES DAMAGE DONE BY SMOKE.

A menace of long standing to the public health is smoky atmosphere. Especially in large cities does smoke ravage the delicate tissues of nose, throat, and lungs. Smoke has always been regarded as a nuisance. But not until the searchlight of scientific investigation revealed its glaring harmfulness to all inhabitants of cities, was the need for the eradication of the evil emphasized. The astoundingly hurtful nature of smoke to the human body can be seen from the following

facts, appearing in the Bulletin of the Smoke Inspection Service of the Mellon Institute, Pittsburgh, Pennsylvania:

"When it is remembered that the average adult consumes about 30 inches of air in each inhalation, or possibly 864,000 cubic inches every day, it does not seem an exaggeration to say that more persons are devitalized, disabled and poisoned, by the impurities contained in smoke-polluted air, than by the noxious ingredients of food and water. Not only do the solid and vaporous ingredients of smoke-begrimed air * * * irritate the sensitive membranes of the eyes, nose, throat, and lungs, and thus aggravate, or cause inflammatory diseases of these organs, or produce collapse of their sensitive tissues, or increase their susceptibility to such specific diseases as bronchitis, pneumonia and subacute forms of phthisis; but the poisonous compounds also enter the gastro-intestinal tract."

It is a consolation to know that there are means of alleviating this danger to the public health. The average warm air heater does away with much of the danger from smoke. The presence of smoke in the atmosphere indicates imperfect combustion of fuel. This in itself is an unnecessary waste. The special methods of promoting perfect combustion in most warm air heaters, besides being economical, are advantageous to the maintenance of health and the preservation of property. Smoke does not only produce diseased condition of the mucous membrane, the lining of the respiratory tract, it is destructive to buildings, materials, and fabrics. In another Bulletin—the result of a thorough investigation—the Mellon Institute of Pittsburgh, states as follows:

"It is well known that the grimy, gray color, which all buildings soon assume in many of our cities, is due to the smoke; but it is not so well understood that much of our best building stone is more rapidly weathered in the atmosphere of a smoky city than it would be in the same length of time in pure country air."

The chemical action of the acids and other ingredients in smoke not only defaces building material, but in time destroys them. Statistics on the soot-fall of various large industrial centers are far in excess of the general notion. For instance, the soot-fall per square mile for one year in four large cities is as follows:

Glasgow	820 tons
Leeds—industrial section	529 tons
London—center	426 tons
Pittsburgh	595 to 1,950 tons

Wall paper, draperies, furniture, and other household goods are directly damaged by the action of smoke. Upholstering materials are harmed by smoke-borne chemicals, and this in spite of the fact that the substances used in this industry are selected with a view of avoiding decay.

The exact monetary loss due to this evil can not be

computed. However, an idea of its extent can be gained from the following taken from the Mellon Institute Bulletin:

"It has been estimated that the smoke nuisance costs Cleveland \$6,000,000, Cincinnati \$8,000,000, and Chicago \$50,000,000 a year. Herbert W. Wilson, of the United States Geological Survey, is authority for the statement that the country as a whole suffers a loss of \$500,000,000 each year in damage done to merchandise, defacement of buildings, tarnishing of metals, injury to human life and to plant life, the greatly increased cost of housekeeping, and the losses to manufacturers due to imperfect combustion of coal."

In the city of Chicago the Health Department has started a vigorous campaign against the smoke evil. Recently the health commissioner ordered the shutting down of the heating plant in the flat building in which the mayor of the city resides. It was not equipped with a warm air heater. Otherwise, such drastic action would not have been necessary. The warm air heater dealer can aid his community to get rid of the smoke nuisance, save money, and, ultimately, enhance his sales of warm air heaters.

DIVING FLUE STOPS HEAT WASTE.

The Torrid Zone Steel Warm Air Heater, made by The Lennox Furnace Company of Marshalltown, Iowa, is built of high grade open hearth heavy steel plates. It is riveted into practically one piece without packed joints. It does not require frequent cleaning



Torrid Zone Steel Warm Air Heater, Made by The Lennox Furnace Company, Marshalltown, Iowa.

because it consumes most of the soot, gas, and smoke. A maximum amount of heat is obtained from the smoke by means of a diving flue before it escapes up the chimney. The smoke leaves the main body or steel shell of the heater and enters the diving flue at the top. At this point it can pass by a direct draft to the chimney pipe and should be allowed to do so when the fuel doors are open. When these doors are closed, the damper should be closed by means of an iron rod just above the heater door. Thus the hot

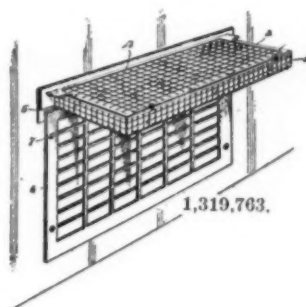
smoke is forced to pass to the bottom of the diving flue under a hanging partition and back again to the top. In this process the smoke travels eight feet before it enters the smoke pipe. The Lennox Furnace Company will be pleased to furnish catalogue and full information to those addressing this Company at 200 Lincoln Highway, Marshalltown, Iowa.

ERECTS BUILDING FOR ENAMELING.

The steady growth of the business of the Cooperative Foundry Company, Rochester, New York, gives every evidence of a permanent ratio of increase. Enlargement of its present facilities is made necessary to allow for this development. The company is, therefore, erecting a new building 60x120 feet in which to do its enameling work. The structure is to be fire-proof in every respect, and will be substantially built of concrete and iron.

OBTAINS PATENT FOR AIR-FILTER FOR WALL REGISTERS.

Under number 1,319,763, United States patent rights have been granted to Edward J. Drew, Detroit, Michigan, for an air-filter for wall-registers described in the following:



A device of the character described, comprising a basket of rectangular form and of shallow depth, said basket being formed of an open mesh wire material, a loose fibrous material in the basket, a cover hinged to the basket and formed of open mesh wire material, and a supporting flange on one side of the basket adapted to support the basket in an outstanding horizontal position above a wall register.

CAN UTILIZE WISDOM OF PIONEER STUDENT OF HEATING AND VENTILATING TODAY.

Stephen Hales, F. R. S., pioneer student of ventilation and heating, in the preface of his book on ventilation, published in 1743, speaks as follows: "New discoveries are apt to be despised, especially by those who are incompetent to judge of them; and that, no wonder; for we are slaves to old habit and customs, even to the degree of suffering inconveniences which we might easily remedy." How truly may this pioneer scientist's wisdom be applied to the existing generation can be seen from the widespread disinclination to consider seriously the vital question of ventilation at the present time. Even in the year 1743, Stephen Hales realized the disadvantage of ventilation disconnected from heating. He had made many and varied experiments on the subject of ventilation and heating. After a careful investigation of ventilation and heating of hospitals he writes as follows: "As to hospitals, where ventilation is to be used with proper caution, it may be well, especially in the case of some distempers,

to draw the bed-curtains close, not only during the ventilation, but also for a few minutes after each ventilation, and till the cool, fresh air is well warmed and blended with the warm air of the room." It is due to the persistent study of men like Stephen Hales that today patients in hospitals need not be inconvenienced while a change of air is being made in the room. Warm air heaters have done away with this ancient mode of protection. The scientific principles of warm air heating are the combined knowledge derived from investigations since the time of Stephen Hales. It is a system of heating that always had in view the maintenance of health and individual comfort. That it has accomplished its object may be seen from the rapidly increasing demand for warm air heaters—in many cases the outright discarding of some other system in favor of warm air heating.

WITHSTANDS OWN HEATING POWER.

All parts of the Pyramid Air Blast Warm Air Heater, manufactured by the Forest City Foundry and Manufacturing Company, Cleveland, Ohio, are made



Pyramid Air Blast Warm Air Heater, Made by the Forest City Foundry and Manufacturing Company, Cleveland, Ohio.

to withstand the immense heating power developed by this warm air heater, claim the makers. These warm air heaters are constructed with perfect fitting deep cup joints. Being simple in construction, parts are easily replaced. The grate in the Pyramid Air Blast Warm Air Heater is an especial feature. The Pyramid Grate effectually removes all the ashes without the loss of any coal. It is declared to be particularly adapted to the cheaper grades of soft coal. Complete details and catalogues may be obtained by writing the Forest City Foundry and Manufacturing Company, Cleveland, Ohio.

VITIATED AIR IS MOST RAVAGING DURING SLEEPING HOURS.

Vitiated air creates its greatest ravages on the human body during sleep. One of the most important functions necessary to the performance of sleep is the maintenance of an exact equilibrium in the amount of oxygenated blood transmitted to the brain. Whenever the supply of oxygen is interrupted by some means or other, sleep likewise is disturbed. During the rest hours of the night, the olfactory nerves, the nerves of smell, are not able to inform the brain of the danger of vitiated air. The sense of smell is not active during sleep. The person slumbers on, probably due to utter exhaustion, but the injurious elements in impure air continue their ravages. Ventilation during sleeping hours, therefore, is of more importance than it is dur-

ing waking hours. A constant supply of fresh air—and in winter of the right temperature—must be provided in order that the reparative forces of sleep may properly function. In winter this problem is especially difficult. Protection from colds, liable to be contracted at night if the supply of air is left to the vicissitudes of nature, must be considered. Only one method is known today, which satisfactorily meets the requirements of fresh air, properly heated. That is to obtain a supply of fresh air, heat it, and conduct it, by some means or other, to places where needed. The average warm air heater of modern times meets all of these essential needs. Not only has it been found that warm air heaters do this, but at a lower cost, in the long run, than ordinary heating.

DESIGNED FOR YEARS OF SERVICE.

The New Idea Pipeless Warm Air Heater made by the Utica Heater Company, Utica, New York, and Chicago, Illinois, illustrated herewith, is surrounded by



New Idea Pipeless Warm Air Heater, Made by The Utica Heater Company, Utica, New York.

two separate castings. Heavily constructed this warm air heater is designed to give years of satisfactory service. Wood, hard or soft coal may be satisfactorily used as fuel. The grate is of the revolving type and is easily handled. For wood, a flat grate can be furnished to be placed over the regular grate. It has a two-piece corrugated firepot. All castings are made to stand severe service. The best grade of iron is used throughout. This warm air heater is cup jointed—an extra precaution against escaping gas and dust. Provision is made to allow a hot water coil to be attached. Inquiries concerning The New Idea Pipeless Warm Air Heater will receive prompt attention if addressed to The Utica Heater Company, Utica, New York, and 218 West Kinzie Street, Chicago, Illinois.

ENGLAND USES WARM AIR HEATER.

The House of Commons in England is heated by a battery of warm air heaters. The gratings are installed in various places along the floor, and are covered with a porous mat. This is to prevent draft. Many of the leading theaters in London are heated in a similar manner.

Intentions are as good as far as they go—but results are better.

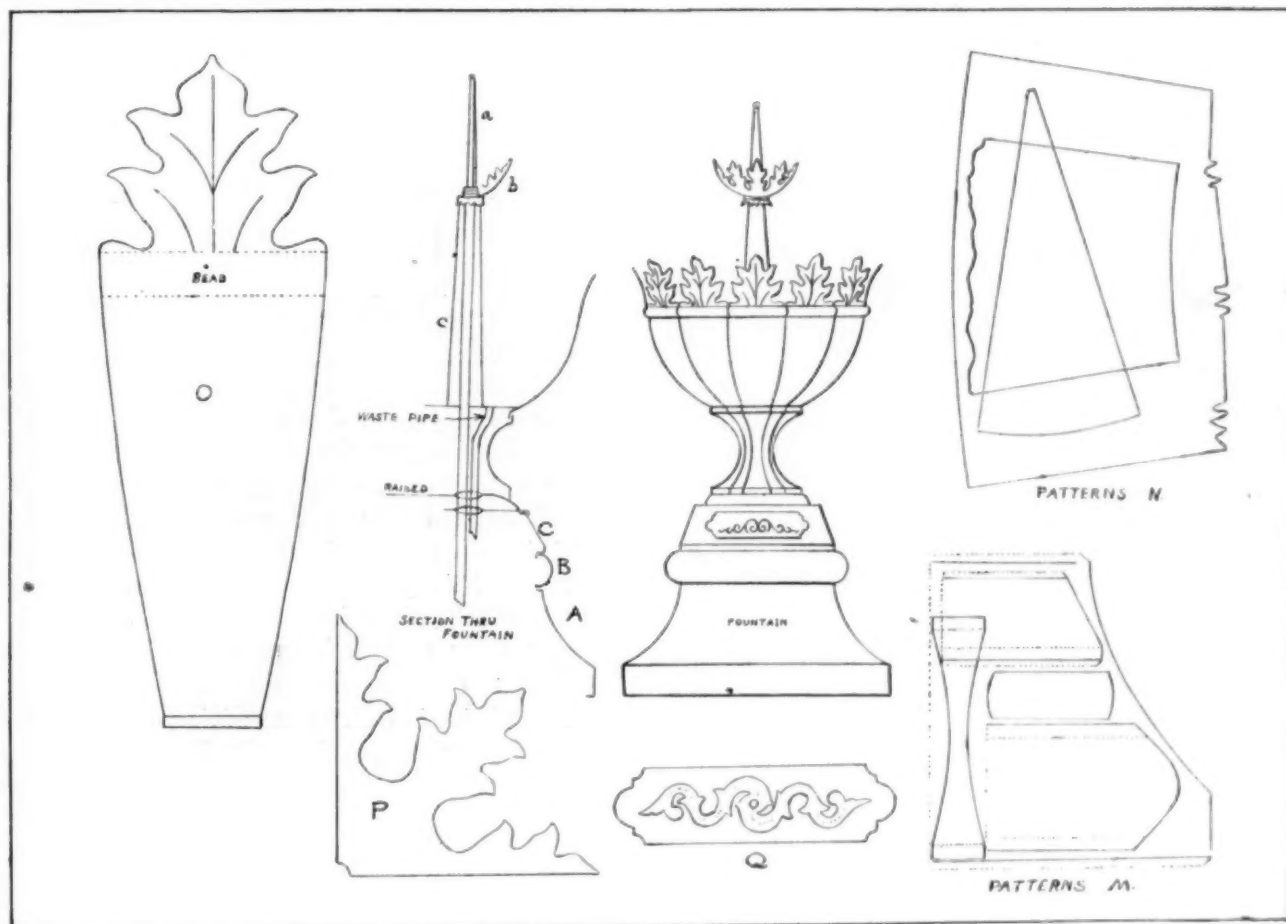
PRACTICAL HELPS FOR THE TINSMITH

FOUNTAIN LAYOUT.

By O. W. KOTHE.

Many of our craft own their own homes, and others live in spacious surroundings, which will permit a fountain to be erected. Sheet metal men should always be interested in beautifying their lawns with artistic designs of urns, vases, fountains, etc.

on curved surfaces, and add a zinc strip to make rigid. In this way we use the patterns at M and N, also at O and P. The ornament Q is cut out and straightened by means of a hot copper, sweating it on one end to keep it in position. Then lay it on the stake scroll down and with a mallet draw out the impressions. It is well to solder this on skimming the solder along all raw edges and running it smooth.



Fountain Layout.

We here have a comely design which the writer has made use of on numerous occasions, and I think appeared in the columns of the AMERICAN ARTISAN some eighteen years ago. Much of the leaf work is very interesting and can be nicely made of zinc, using a small instrument to impress the veins as shown.

In looking at the section through fountain, we see the various parts as -a- the spire, -b- leaf ornament, -c- column, with a waste pipe as shown.

Observe the various details in base and how joints are made to shed the water. The base is square and is built in three sections, A-B-C, each soldered together separately.

Patterns as required are all of a simple nature and require very little comment. So lay them out as required. Begin with the lower section and work up. When assembling make the miters secure, allow lugs

By following this up we finish the fountain, which should be placed on a level foundation, preferably concrete.

CITY OF MASSILLON, OHIO, ELECTS A TINSMITH FOR MAYOR.

His previous service as city councilman of Massillon, Ohio, proved so efficient and satisfactory to the voters of that municipality that they elected H. H. Vogt, a tinsmith, as Mayor on the Socialist ticket, November 5, 1919. All the other candidates for city offices were chosen from the Republican ticket. Mr. Vogt has always been a credit to the craft by reason of his sincere and thorough workmanship. His fellow citizens ignored the differences of political theories and the animosities of partisanship in order to

express their confidence in his ability as an artisan and a law-maker. His business training and integrity are said by his friends to warrant the prophecy that he will administer the affairs of the city to the best interests of the public.

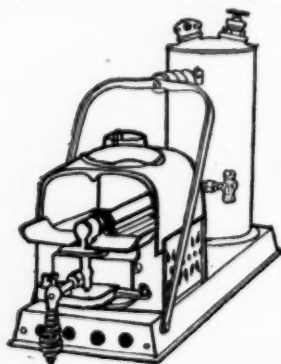
THE MILWAUKEE SHEET METAL LOCAL HOLDS MONTHLY MEETING.

Few topics are of greater importance to sheet metal contractors than the matter of apprentices and their schooling. It was fitting, therefore, that this subject should occupy the attention of the regular monthly meeting of the Master Sheet Metal Contractors' Association of Milwaukee, Wisconsin, when the members gathered November 5, 1919, at 8:15 p. m. in Association Headquarters, 456 Broadway, Milwaukee, Wisconsin. The President of the Association, Frank Romberger, introduced the question of apprenticeship training, and the Secretary read a communication from C. A. Bailey, instructor of sheet metal in the Vocational Junior High School of Cincinnati, Ohio, who outlined and explained the program of studies used in his department of the Cincinnati school.

Excerpts from the Milwaukee Common Council Journal of proceedings were read by President Romberger in reference to the enactment of a law licensing contractors. The matter was vigorously debated during the meeting. The President suggested that the standing committee on the matter of licensing contractors make it a point to be present at the next session of the City Council, and to present the views of the Association in the preliminary hearings before that body. Before the meeting came to a close the Entertainment Committee was instructed to make arrangements for the annual luncheon and reunion which is to take place before the end of the year.

HAS MANY YEARS OF EXPERIENCE.

Forty-eight years of successful manufacture are behind each of its improved models of soldering furnaces, states the Burgess Soldering Furnace Company,



Number 7 Gem Soldering Furnace, Made by the Burgess Soldering Furnace Company, Columbus, Ohio.

Columbus, Ohio, makers of the Number 7 Gem Soldering Furnace, illustrated herewith. The improved drip cup has a greater heating surface and gasoline capacity. The seamless steel generator pipe has a spiral core which causes the gasoline to travel 75 per cent farther than is ordinarily the case, says the Burgess Soldering Furnace Company. An experimental department maintained by this company seeks continually to improve the soldering furnaces of its manufacture. Up to this time they have reached a high stage of perfection. A communication to the Burgess Soldering Furnace Company, Department "A," Columbus, Ohio, regarding its products will receive prompt attention.

STANDARDIZES TIN FOR ROOFING.

With the intention of giving the public better service and more uniformly reliable material—thus benefitting the trade as well—the Roofing, Metal and Heating Engineers of Philadelphia, Pennsylvania, appointed a Tin Roofing Committee in March, 1919, to devise a plan for standardizing roofing tin. The first report of the Committee was published in the issue of AMERICAN ARTISAN AND HARDWARE RECORD for July, 19, 1919, and the final report in the issue of August 30, 1919.

The Committee's final report resulted in the adoption of "standardized Nu-Dura-Tin roofing." The name is copyrighted and, for the present, the product will be handled in Philadelphia. It has the endorsement and support of the Metal Club of Philadelphia, composed of the following jobbing houses:

American Tin and Terne Company,
Merger Manufacturing Company,
L. D. Berger Company,
Carter, Donlevy and Company,
Gummey, MacFarland and Company,
Hall and Carpenter,
Frederick J. Knoedler,
Marshall Brothers and Company,
Merchant and Evans Company,
W. F. Potts, Son and Company,
Riter Brothers and Company,
Whitaker-Glessner Company.

The Committee, according to its recent announcement, brought to light the fact that considerable harm was being done to the tin roofing business by placing on roofs of tin plate of inferior grades which were not manufactured or intended for roofing purposes, but for other commercial uses. The announcement continues:

"The wholesale distributors advised the Committee of the Roofing Metal and Heating Engineers that each distributor in Philadelphia handled numerous grades of tin plate of high quality, which had for years been giving uniform satisfaction and that any medium or high grade brand of tin plate would withstand the elements for a period of from 25 to 50 years.

"The Committee of The Roofing Metal and Heating Engineers advised the distributors that they recognized this statement to be correct, but that owing to the great variety of brands, it was difficult for the public, unfamiliar with the industry, to distinguish between the finest grades and those manufactured for other purposes than roofing.

"After considering several plans, it was decided to place upon the market a Standard Brand, which would be the result of the combined knowledge and experience of the Roofing Contractors and Distributors of Philadelphia.

"After numerous conferences and consultation with two of the leading tin plate experts in the United States, the specifications for Nu-Dura-Tin were determined.

"Manufacture of this plate was immediately started and stocks of it are now available."

The selling arguments in favor of "Nu-Dura-Tin"

are summarized by the Roofing, Metal, and Heating Engineers of Philadelphia as follows:

Absolutely Fireproof—Impossible to burn; protection from flying sparks and acts as blanket to fire within.

Low Insurance: Buildings with metal roofs receive lower rates.

Sanitary: Can not clog up eaves trough and conductor pipes.

Sheds clean rain water; minimum cost of maintenance. Leaks can be readily located and repaired at small cost.

Low First Cost: Metal roofing is cheaper than competing materials of supposed equal value.

Appearance: Presents a neat and clean appearance and can be painted any color.

Flexible: Provides for expansion and contraction and it is not affected by settlement of building or seasoning of timber.

Lightning Proof: Conducts electricity to the ground.

Minimum Weight: Heavy rafters not necessary.

Durable: Will last 50 to 75 years.

Weather Proof: Can be subjected to all extremes of climate.

Salvage: Can be removed and reused or sold.

Adaptable: Can be used on roof of any size, shape or pitch.

Well Established: Metal roofs have been used in all parts of the world for many years and the above reasons are well established.

USES CLEVER ADVERTISING DEVICES.

People who pass the sheet metal shop of J. T. Henshaw and Company, 736 Thirteenth Street, N. W., Washington, D. C., always stop to read the unique advertisements posted on the sign-frames in front of the company's place of business. Once in a while some person hurrying to catch a train, or to escape a pursuing policeman, fails to pause in front of the shop. Such persons, however, constitute a negligible percentage of the passers-by. All the others have fallen into the habit of reading the clever verses and persuasive announcements of J. T. Henshaw. He has built up a lucrative trade by keeping his business constantly before prospective customers through his highly individualized form of advertising. Day after day he has been repeating and emphasizing his policy of good work and fair prices. He tells the readers of his advertisements: "If we quote you a higher price for a piece of work than some other man, don't think we are trying to rob you. We know men who rob themselves by working low and their patrons by rendering indifferent service."

LAWS GOVERN BUSINESS SUCCESS.

The laws of successful business are unchangeable. Uncurbed enthusiasm drifts into speculation; then into recklessness. The would-be successful business man must regard the laws of successful business. They are not manifold. They are few. They are harsh. Among others are: intelligent advertising, careful buying, and diligent management.

COMBINES CATALOGUE WITH LETTER.

An excellent method of keeping one's products constantly before one's customers has been devised by the Consolidated Sheet Metal Works of Milwaukee, Wisconsin. It consists of a new form of letter head containing four pages. The first page is left blank, with the exception of the title and description of the company, for correspondence. The remaining three pages contain graphic line drawings and halftones of the various fire-proof windows, fire doors, metal skylights, etc., made by the Consolidated Sheet Metal Works of which Paul L. Biersach is Secretary-Treasurer. An ordinary catalogue may be lost or thrown away. But the combined catalogue and letter devised by Mr. Biersach renews the message of the company's products every time that correspondence goes out of its office to any of its clients or prospective customers.

SYMBOLIZES UNUSUAL STRENGTH.

No one will doubt, if familiar with the story, that Samson was an exceptionally strong man. The Machine Appliance Corporation, Brooklyn, New York, manufacturers of the "Samson" hand punch, illustrated herewith, state that their product stands out among other tools as did Samson in his time among men. They state that these punches are a boon to every workman on the job. Their powerful leverage—10 to 1 ratio—appeals to mechanics. No burr is left after cutting. Dies are interchangeable. Seven sizes are available. Removal and exchange is simple. Construction renders the "Samson" hand punch easy to work and comfortable to handle, state the manufacturers. It weighs one pound, and can be carried in the pocket. It will punch 20 gage soft metal. Being made of high grade material, it is durable and will withstand long usage. Price, description of bench punches, and other information may be obtained from the Machine Appliance Corporation, 351 Jay Street, Brooklyn, New York.



"Samson" Hand Punch, Made by the Machine Appliance Corporation, Brooklyn, New York.

IS ALSO LAW IN BUSINESS.

Survival of the fittest is a law of business as well as of nature. In business only those who adapt themselves to the circumstances existing survive the ruthless authority of the sheriff. Nor is that all. Merely to survive the sheriff is not enough. Permitting the business to stay in a rut is neglecting opportunity for advancement. Figuratively speaking, nothing stands still. You either go forward or go backward. Survive and surpass your competitors by persistent, tireless effort.

TIN IS PRODUCED IN ALASKA.

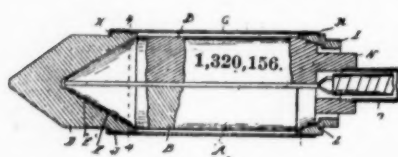
The tin mines of Alaska produced 136,000 pounds of tin, valued at \$118,000, in 1918, according to the United States Geological Survey, Department of the

Interior. These figures may be compared with 200,000 pounds, valued at \$123,300, in 1917. The decrease in output in 1918 was due to the fact that only one dredge was operated. Additional tin, however, was recovered by sluicing. The first important production of Alaska tin was reported in 1902, when the output was 15 tons. Since 1912 the average has been over 100 tons annually.

The recent discovery of placer tin has been reported from Potato and Humboldt creeks, on Seward Peninsula, and from Moran Creek, a tributary of Melozi River, where the gravels are said to contain $2\frac{1}{2}$ pounds of tin and 10 cents worth of gold to the cubic yard.

ASSIGN PATENT FOR ELECTRICALLY HEATED SOLDERING IRON.

Under number 1,320,156, United States patent rights have been granted to Frank Kuhn, Jay A. Hand and Jules G. Spiess, Detroit, Michigan, assignors to American Electrical Heater Company, Detroit, Michigan, a Corporation of Michigan, for an electrically-heated tool described herewith:



1. In an electrically heated tool, the combination with a heating unit and a heat-distributing body in contact therewith, of a body to be heated having a conical engagement with said heat-distributing body, and clamping means for forcing the conical engaging surfaces together, said clamping means being spaced from said heat-distributing body.

WANTS CENTER END BOOT PATTERN.

TO AMERICAN ARTISAN AND HARDWARE RECORD.

I should greatly appreciate it if you would publish a pattern for a center end boot in your department of "Practical Helps for the Tinsmith." I have studied this department carefully and regularly and have derived a great deal of benefit from it in my daily work.

TINNER.

—, Iowa, November 3, 1919.

SAYS ZINC WILL BE A BIG FACTOR IN EXPANSION OF INDUSTRY.

In the opinion of a prominent zinc sales manager, the West gives every appearance of being in the early stages of wonderful progress. That zinc will be an important factor in this expanding industrialism was his prediction. "The more extensive consumption of zinc products will affect the building, metal working, paint, rubber goods and other industries," he declared. "because these materials have been found practical for many diversified lines."

"Zinc in paint is becoming a by-word in houses where they demand quality. This is because this material gives to paint a toughness that can not otherwise obtain, and is due also to the luster and color constancy it imparts.

"People are building for permanency, also, which

will bring zinc roofing into this country more and more each year. Although little used for roofing in the United States, zinc has been the universal roofing material in Continental Europe for centuries, where its durability has been thoroughly demonstrated.

"Strip zinc is finding new avenues every day. In the building program that must soon begin to satisfy a constantly increasing demand for commercial and domestic housing, zinc will be found playing a more important role than is generally recognized."

NOTES AND QUERIES.

Ice Cream Cone Machinery.

From Kirby and Naber, 512-514 College Street, Springfield, Missouri.

Please inform us where we can buy machinery for the manufacture of ice cream cones.

Ans.: The Union Machine Works and Iron Foundry, 1821 South Water Street, Philadelphia, Pennsylvania.

Merchants Insurance Companies.

From Bills and Ewers, Milledgeville, Illinois.

Can you give us the address of several retail Merchants Insurance Companies who give the retail merchant a refund of part of the premium at the end of the year?

Ans.: Iowa Hardware Mutual, Mason City, Iowa; The Minnesota Hardware Mutual, Metropolitan Building, Minneapolis, Minnesota; Wisconsin Hardware Mutual, Stevens Point, Wisconsin; Ohio Hardware Mutual Insurance Company, Coshocton, Ohio; Illinois Hardware Underwriters, Elgin, Illinois.

Electric Soldering Irons.

From F. B. Karl, 1782 West 54th Street, Cleveland, Ohio.

Where can I buy Electric Soldering Irons?

Ans.: American Electric Heater Company, Detroit, Michigan; Dover Manufacturing Company, Dover, Ohio; Apex Electric Company, 1410 West 59th Street, Chicago, Illinois.

Time Clock Switches.

From Heilstedt and Company, Oglesby, Illinois.

Could you tell us who makes time clock switches for automatically extinguishing window light?

Ans.: Manhattan Electric Supply Company, 112 South Wells Street, Chicago, Illinois; and the Paragon Electric Company, Old Colony Building, Chicago, Illinois.

Sheet Aluminum.

From W. G. Cripps, 811 Sixteenth Street, Sioux Falls, Iowa.

Where can I buy sheet aluminum?

Ans.: Metal Products Company, 100 S. Jefferson Street, Chicago, Illinois.

Acetylene Fixtures.

From C. R. Bradley, Scotts, Michigan.

Can you give me the names of firms handling Acetylene Fixtures?

Ans.: Davis Acetylene Company, Elkhart, Indiana, and Ideal Epworth Acetylene Company, Waterloo, Iowa.

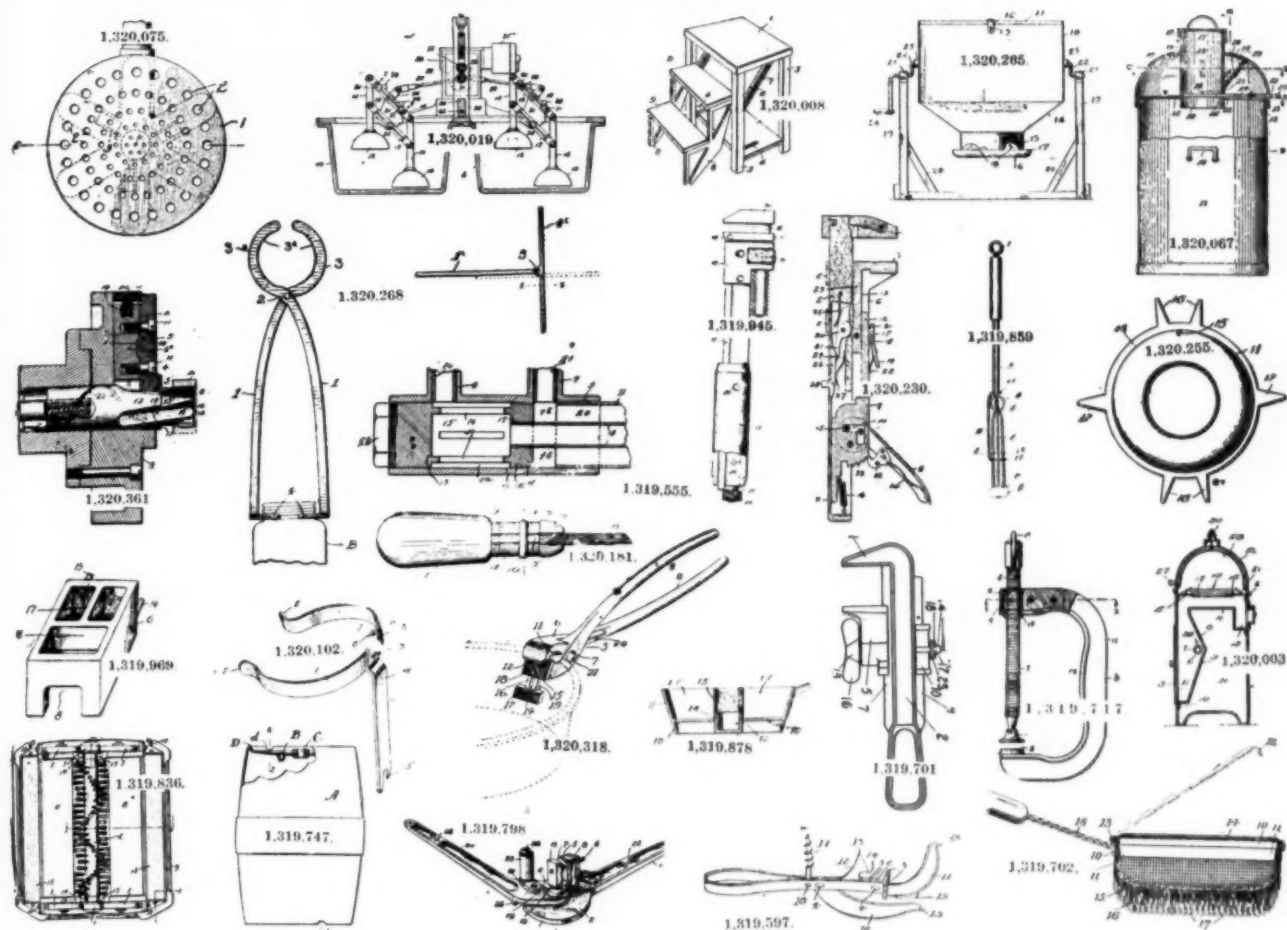
Shaker for Hot Blast Heater.

From George O. Crouch, 25 Market Square, Chattanooga, Tennessee.

Can you give me the address of H. S. B. and Company, Chicago, Illinois, from whom we would like to get a shaker for a hot blast heater Rev-O-Noc Emergency Blast Number 315.

Ans.: Hibbard Spencer Bartlett and Company, State Street Bridge, Chicago, Illinois.

NEW PATENTS.



1,319,555. Water-Heater. Yens Peder Andersen, De Kalb, Ill. Filed May 19, 1919.

1,319,597. Can-Opener. Benjamin F. Lung, Benzonia, Mich. Filed Aug. 16, 1918.

1,319,701. Wrench. Erwin Griesbaum, St. Louis, Mo. Filed Apr. 11, 1919.

1,319,702. Mop. Lottie Haas, New York, N. Y. Filed Feb. 27, 1919.

1,319,717. Screw-Clamp. Frank G. Marbach, Cleveland, Ohio, assignor to William Trostler, Cleveland, Ohio. Filed Dec. 6, 1917.

1,319,747. Metallic Barrel. Henry W. Avery, Cleveland, Ohio. Filed Nov. 27, 1914.

1,319,798. Metal-Bending Device. Percy Satterlee, Detroit, Mich. Filed Aug. 12, 1918.

1,319,836. Carpet-Sweeper. Homer Le Roy Boyle, Lansing, Mich., assignor of one-third to Mark H. Smith, Lansing, Mich. Filed June 25, 1917.

1,319,859. Bottle-Washer. Frona C. Feckley, Delta, Iowa. Filed Dec. 13, 1918.

1,319,878. Egg-Frying Pan. Kenneth A. Lewis, Sandy Creek, N. Y. Filed Nov. 18, 1918.

1,319,945. Quick-Adjustable Wrench. William Louis Bessolo, San Diego, Calif. Filed May 6, 1919.

1,319,969. Combined Kitchen-Stove and Hot-Water Heater. George J. Rymal, Denver, Colo. Filed June 12, 1917.

1,320,003. Stove. Betty Hardy, Charleston, W. Va. Filed May 27, 1918.

1,320,008. Combined Stool and Stepladder. Daniel L. Holwick, Canton, Ohio. Filed June 30, 1919.

1,320,102. Jar-Lid Lifter. Claude V. Smock, Portland, Oreg. Filed July 8, 1919.

1,320,019. Washing-Machine. William D. MacQuesten, Mount Vernon, N. Y., assignor to The Aurora Company, Inc., a corporation of New York. Filed Nov. 19, 1915.

1,320,067. Garbage-Can. Wojciech Kowalski, Bay City, Mich. Filed March 13, 1919.

1,320,075. Attachment for Gas-Burners. Catherine Theresa McLaughlin, New York, N. Y. Filed Feb. 26, 1919.

1,320,181. Tool-Handle. Charles Smith, Houghton, Mich., assignor of one-half to Myron W. Lytle, Hancock, Mich. Filed Oct. 1, 1917.

1,320,230. Wrench. William F. Homrighausen, San Leandro, Calif. Filed Dec. 3, 1917.

1,320,255. Stovepipe Attachment. Mary McGee, Muscatine, Iowa. Filed Nov. 4, 1918.

1,320,265. Ash-Sifter. Feliks Motasky, Stratford, Conn. Filed Nov. 2, 1918.

1,320,268. Fruit-Jar Lifter. James M. Perkins, Maud, Okla. Filed Jan. 17, 1918.

1,320,318. Hot-Pan Lifter. Frederick T. Conley, Boston, Mass. Filed May 18, 1917.

1,320,361. Chuck. Robert F. Runge and Spencer Clifford, Philadelphia, Pa. Filed Apr. 10, 1917.

WORRY BRINGS NO BENEFITS.

We borrow most of our troubles. We anticipate them, and worry; we imagine all kinds of dire calamities; we can see fate just around the corner, ready to smite us with the bludgeon of failure; but when we approach the corner we find that fate has not even noticed us. We have fretted and fumed to no purpose. We have wasted our energies.

STOP THE LITTLE LEAKS.

Stop the little leaks in business. There are many in the best directed establishment. A persistent search will reveal them. Plug them up. Prevent them. A leaky pan never holds water. A leaky business will never bear profits.

WEEKLY REPORT OF TRADE AND THE MARKETS

COAL STRIKE THREATENS TO SLOW DOWN THE STEEL INDUSTRY.

Fear is expressed that the output of steel will be restricted by a shortage of coal due to the strike of the bituminous miners. The steel industry has struggled through six weeks of a strike in its own ranks and is just beginning to make real headway, several of the plants have resumed operations and production as a whole is coming around to something more like the amount necessary to handle some of the business offered.

Naturally the strike in this country is throwing considerable business to Canada and elsewhere, any place where it may be possible to obtain supplies. The oil industry is badly in need of weld pipe for its operations and is attempting to locate supplies in order to do as much as possible before the winter closes down operations in the more northern fields.

It is claimed that producers are operating at the rate of 60 per cent of the pre-strike rate, which was about 80 per cent of the total capacity in all lines, which would have the plants now running a little less than half of capacity. On the other hand, the workers claim that considerable of this operating is being done by green hands and that production is naturally suffering as a result.

Production of finished steel is increasing in better ratio than unfinished descriptions as several of the mills which do not furnish their own steel have been able to concentrate their efforts on this branch of the industry.

STEEL.

While no official or formal statement has been made, it has been the understanding in the steel trade for two or three weeks past that the leading interest is unanimously of the opinion that finished steel prices should be held at their present level, and it is assumed that principal independent interests are of the same opinion. Prompt deliveries may, however, bring premiums over the basic prices, which has happened before.

Plates and bars are coming in for a strong demand and advices from the eastern markets indicate that consumers are scouring the warehouses and the jobbing plants in an attempt to secure supplies with the natural result that the stocks of the latter have been almost cleaned up. The big plants are merely going ahead and are making deliveries against old contracts as fast as they can and are not accepting any new business. On the other hand the smaller mills which have little business contracted for ahead, are making large profits whenever it is possible to make a delivery as they are receiving large premiums over the established schedule of prices.

COPPER.

No substantial changes have occurred in the copper market during the week.

Sales of domestic and foreign account, were probably under rather than over 100,000,000 pounds during October, domestic as well as foreign business having been disappointing but considering the many drawbacks existing in trade, including labor unrest and threatened strikes, the course of the market was not surprising.

Wire drawers and electrical equipment manufacturers were the largest purchasers reflecting the improved conditions in power plant development throughout the country, but brass founders, operating scarcely more than 50 per cent of capacity, were indifferent buyers. It is notable, however, that a feeling of optimism underlies manufacturing industries and as soon as labor conditions permit, production, in nearly all lines consuming copper, will be increased. In fact, it is notable that manufacturing facilities are being steadily increased by the purchase and installation of improved equipment and other labor saving devices, so that eventually manufacturing plants will be less dependent upon union labor. Apparently, industry is in a transitory stage, brought about by the revolutionary methods expressed by union labor.

It is estimated that the output of crude copper in the United States last month approximated 95,000,000 pounds, some of the mines having transformed men from producing to development work. As importations are running at about the rate of 35,000,000 pounds a month, the amount of new copper available in October was approximately 130,000,000 pounds or about 30,000,000 pounds more than combined domestic and foreign requirements.

Exports during last week of October, according to Government returns from the Customs House, were less than 1,000 tons, including 554 tons to England, 100 tons to Belgium, 200 tons to France and 100 tons to Scandinavia. Total exports thus far reported for October were 6,269 tons. The meager foreign shipments reported were due to freight handlers' strikes, but more copper was shipped from plants than was cleared from ports.

Average monthly shipments during last quarter 1919 will probably reveal the movement more clearly than do single months, but even with foreign shipments of 40,000,000 pounds in October, between 80,000,000 and 90,000,000 pounds were available for domestic consumption while domestic melting today is probably not over 60,000,000 pounds a month.

According to the French Commission now in this country, France will need 90,000 to 100,000 tons of American copper during the next year, which is at a rate of only about 8,000 tons a month. Other reports from France indicate that aluminum, of which France

is a large producer, is being used by industries in lieu of copper wherever possible.

In the Chicago market copper sheet is quoted at 32½ cents per pound.

TIN.

The return of some of the striking longshoremen improved the situation as regards spot tin supplies slightly early this week, but the situation remains acute. Upwards of 8,000 tons of tin of value of around \$9,000,000 are tied up in the port.

London cables reported a sharp break in the Singapore market, the c. i. f. London quotation breaking £9 10s. to £272 10s. Standard spot and futures reacted £2 to £272 15s. and £273 10s. and the Straits spot quotation came £2 5s. lower at £272 15s.

The continued labor unrest all over the world is not favorable to industrial activity, and prices yield readily to pressure in spite of a fundamentally sound situation. The feature of the New York situation is improvement in dock strike conditions in consequence of which small unsold lots of Straits tin in store have been reduced to 55 cents per pound, but even at that there is a premium of 2 cents per pound over the price of Straits on steamers in the harbor, the general market on same being 53 cents to 52.75 cents per pound, although there may still be weakly held lots from second holders.

99 per cent tin is also easier with small quantities of spot at 54.25 cents. It is reported that special lots have been offered from steamers at dock down to 52 cents

LEAD.

A distinct firmness characterizes the condition of the St. Louis lead market. Sales of soft Missouri brand for November shipment have been made at as high as 6.65 cents St. Louis basis or \$3 a ton over the so-called "official" price. A large consumption of lead is reported in all of the principal lines and business is said to be especially good in the pipe and plumbing lines.

In the Chicago market American pig lead is selling at \$7.15 per hundred pounds and bar lead at \$7.65 per hundred.

SOLDER.

The quotations ruling the Chicago market are as follows: Warranted, 50-50, per pound, 34.75 cents; Commercial, 45-55, per pound, 31.75 cents; Plumbers' per pound, 28.65 cents.

ZINC.

The situation in the zinc market is summarized by a leading authority as having been marked by active trading in the past four weeks, accompanied by correspondingly active price movements in this metal. The buying that brought about this rise was partly for European account and partly by large operator-producer interests. As to these latter, a connection has been inferred between their negotiations and the extraordinary large shipments of zinc to Japan. During the single month of September these shipments aggregated over 7,300 tons, or nearly as much as Japan bought of us in the five years 1914 to 1918 all put together. One explanation given is that Japan is making a drive for the Eastern trade in brass, formerly in German hands,

although other conjectures are not lacking. However that may be, this export demand has furnished support to the market at a time when it was most needed, for the steel strike put an almost complete stop to domestic buying.

Stocks of November zinc are believed to be heavy, but if there is going to be difficulty in moving them by reason of railroad interruption, due to lack of coal, there will be no object gained in reducing prices. Besides, the strike will affect production as well as consumption, which is to some extent a counterbalancing consideration.

TIN PLATE.

Reports from Pittsburgh indicate that tin plate mill production has made gains with the leading interest now operating more than 60 per cent of its mills. Heavy demands continue to be made for tin plate from domestic consumers for early delivery, but they are having considerable trouble in interesting makers. Some of the latter are neither quoting nor accepting business, fearing to become obligated too far ahead in the event that the coal strike interferes with shipments.

In the Chicago market, first quality bright tin plates, 1C, 14x20, are quoted at \$13.20 per box of 112 sheets and other gages and sizes at corresponding figures.

SHEETS.

Some of the independent companies are said to be obtaining premiums over the March 21 basis for prompt shipment, but as practically all of the current production is needed to meet contract obligations, little business can be accepted except at the expense of old obligations. Makers generally are inclined to satisfy these demands before giving consideration to new orders. About all the tonnage available for early shipment is from warehouses or manufacturers' stocks.

OLD METALS.

Wholesale quotations in the Chicago district which may be considered nominal are as follows: Old Steel axles, \$26.00 to \$27.00; old iron axles, \$28.50 to \$29.50; steel springs, \$20.50 to \$21.50; No. 1 wrought iron, \$19.00 to \$20.00; No. 1 cast, \$24.00 to \$25.00, all net tons. Prices for non-ferrous metals are as follows, per pound: Light copper, 15 cents; light brass, 8½ cents; lead, 5 cents; zinc, 5 cents; cast aluminum, 24 cents.

PIG IRON.

More sales have been made by the leading iron interests in the last few days than in the last few weeks, at steadily rising prices. The scarcity of pig iron is increasing and sellers are having much difficulty in finding the metal to meet the new demands for early delivery. The situation is being complicated by the coal strike, as the railroad administration continues the ban on the use of open-top cars, exclusive of certain types, except for coal traffic. Some makers still hold back from accepting orders for next year. One of them reports an aggregate inquiry for that delivery now on hand of 32,000 tons, mostly foundry grades.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS.		LEAD.		Broad.		BEATERS.	
PIG IRON.		American Pig.....\$7 15		Plumbs, West, Pat.....List		Carpet. Per doz.	
Basic.....\$25 50		Bar.....7 65		" Can. Pat.....\$69 00		No. 7 Tinned Spring Wire... \$1 10	
Northern Fdy., No. 2... 26 75		Sheet.		" Firemen's (handled),		No. 8 Spring Wire coppered... 1 50	
Southern Fdy., No. 2... 30 00		Full coils.....per 100 lbs. \$9 50	per doz. 21 00		No. 9 Preston.....1 75	
Lake Sup. Charcoal... 31 45		Cut coils.....per 100 lbs. 9 75		Single Bitted (without handles).		Egg. Per doz.	
Malleable.....27 25		TIN.		Warren Silver Steel.. on application		No. 50 Imp. Dover.....\$1 10	
FIRST QUALITY BRIGHT		Pig tin.....60c		Warren Blue Finished. "		No. 102 " " tinned... 1 35	
TIN PLATES.		Bar tin.....61c		Matchless Red Pole.....\$11 50		No. 150 " " hotel... 2 10	
IC 14x20.....112 sheets \$13 20		HARDWARE.		Double Bitted (without handles).		No. 10 Heavy hotel tinned... 2 10	
IX 14x20.....14 63		ADZES.		Warren's Natl. Blue, 3 1/2 to 4 1/2		No. 13 " " " 3 30	
IXX 14x20.....16 30		Carpenters'.		lb..... Prices on application		No. 15 " " " 3 60	
IXXX 14x20.....17 50		Plumbs.....Net		The above prices on axes of 3 to 4 lbs.		No. 18 " " " 4 50	
IXXXX 14x20.....18 70		Coopers'.		are the base prices.		Hand. 8 9 10 12	
IC 20x28.....26 40		Barton's.....Net		BAGS, PAPER NAIL.		Per doz. \$11 50 13 00 14 75 18 00	
IX 20x28.....29 25		White's.....Net		Pounds..... 10 16 20 25		Moulders'.	
IXX 20x28.....32 60		Railroad.		Per 1,000....\$5 00 6 50 7 50 9 00		12-inch.....Per doz. 20 00	
IXXXX 20x28.....37 40		Plumbs.....Net		BALANCES, SPRING.		Call.	
COKE PLATES.		AMMUNITION.		Pelouse.....20%		3-inch Nickeled Rotary Bell,	
Cokes, 180 lbs.....20x28 \$16 00		Peters Cartridges.		BARS, CROW.		Bronzed base.....per doz. \$3 50	
Cokes, 200 lbs.....20x28 16 20		Semi-Smokeless.....Less 10-7 1/2%		Pinch or Wedge Point, per cwt....\$8 50		Cow.	
Cokes, 214 lbs.....IC 20x28 16 60		Smokeless.....Less 10-7 1/2%		BASKETS.		Kentucky.....30%	
Cokes, 270 lbs.....IX 20x28 18 50		Shells, Loaded, Peters.		Small Willow.....per doz. 15 00		Door.	
BLUE ANNEALED SHEETS.		Loaded with Black Powder, Less 15%		Medium Willow....." 17 00		New Departure Automatic...\$ 7 50	
No. 10.....per 100 lbs. \$4 85		Loaded with Smokeless Powder,		Large Willow....." 20 00		Rotary.	
No. 12.....per 100 lbs. 4 90		medium grades.....Less 15%		Galvanized Steel. 1/2 bu. 1 bu. 1 1/2 bu.		3-in. Old Copper Bell.....6 00	
No. 14.....per 100 lbs. 4 95		Loaded with Smokeless Powder,		Per doz.....\$11 50 \$17 00 \$22 00		3-in. Old Copper Bell, fancy. 8 00	
No. 16.....per 100 lbs. 5 05		high grade.....Less 15%		Clothes.		3-in. Nickeled Steel Bell.....6 00	
ONE PASS COLD ROLLED BLACK.		Winchester.		Boring Machine.....60%		3 1/2-in. Nickeled Steel Bell... 6 50	
No. 18-20.....per 100 lbs. \$5 70		Smokeless Repeater Grade... 10&5%		Irwin's.....25%		Hand.	
No. 22-24.....per 100 lbs. 5 75		Smokeless Leader Grade... 10&5%		Carpenter's Nul.....50%		Hand Bells, polished.....15%	
No. 26.....per 100 lbs. 5 80		Black Powder.....10&5%		Hollow.		White Metal.....15%	
No. 27.....per 100 lbs. 5 85		U. M. C.		Bonney's.....per doz. 30 00		Nickel Plated.....10%	
No. 28.....per 100 lbs. 5 90		Nitro Club.....10&5%		Stearns, No. 0....." 43 25		Swiss.....15%	
No. 29.....per 100 lbs. 5 95		Arrow.....10&5%		" No. 1....." 43 25		Silver Chime.....10%	
GALVANIZED.		New Club.....10&5%		" No. 2....." 43 25		Miscellaneous.	
No. 16.....per 100 lbs. \$6 50		Gun Wads—per 1000.		" No. 3....." 42 00		Church and School, steel alloys...30%	
No. 18-20.....per 100 lbs. 6 65		Winchester 7-8 gauge.....\$2 25		" No. 4....." 10 50		Farm, lbs... 40 50 75 100	
No. 22-24.....per 100 lbs. 6 80		" 9-10 gauge.....1 94		" No. 30....." 45 00		Each.....\$3 00 3 75 5 50 7 25	
No. 26.....per 100 lbs. 6 95		" 11-28 gauge.....1 63		" No. 33....." 45 00		BEVELS, TEE.	
No. 27.....per 100 lbs. 7 10		Powder. Each		" No. 44....." 17 00		Stanley's rosewood handle, new	
No. 28.....per 100 lbs. 7 25		DuPont's Sporting, kegs....\$11 25		" No. 50....." 48 00		list.....Neta	
No. 30.....per 100 lbs. 7 75		" " 1/2 kegs. 3 10		" No. 55....." 45 00		Stanley's iron handle.....Neta	
WELLSVILLE POLISHED STEEL.		DuPont's Canisters, 1-lb.... 56		" No. 60....." 42 00		BINDING CLOTH.	
No. 18-20.....per 100 lbs. \$7 10		" Smokeless, drums.... 43 50		Boring Machine.....60%		Zincd.....55%	
No. 22-24.....per 100 lbs. 7 20		" " kegs. 22 00		Irwin's.....25%		Brass.....40%	
No. 26.....per 100 lbs. 7 30		" " 1/2-kegs. 5 75		Carpenter's Nul.....50%		Brass, plated.....60%	
No. 27.....per 100 lbs. 7 40		" " canisters. 1 00		Hollow.		BITS.	
No. 28.....per 100 lbs. 7 50		L. & R. Orange, Extra Sporting		Bonney's.....per doz. 30 00		Auger.	
KEYSTONE HAMMERED		kegs.....11 25		Stearns, No. 0....." 43 25		Jennings Pattern.....20%	
POLISHED STEEL.		L. & R. Orange, Extra Sporting		" No. 1....." 43 25		Ford Car.....List plus 5%	
28-26.....per 100 lbs. \$9 85		1/2-kegs. 5 90		" No. 2....." 43 25		Ford's Ship....." 35%	
24-22.....per 100 lbs. 9 35		L. & R. Orange, Extra Sporting		" No. 3....." 42 00		Irwin....." 15%	
BAR SOLDER.		1/2-kegs. 3 10		" No. 4....." 10 50		Russell Jennings....." 35%	
Warranted, 50-50.....per lb. 34.75c		L. & R. Orange, Extra Sporting		" No. 30....." 45 00		Clark's Expansive....." 33 1/2%	
Commercial, 45-55....." 31.75c		1-lb. canisters.....56		" No. 33....." 45 00		Steer's " Small list, \$22 00....." 5%	
Plumbers'....." 28.65c		L. & R. Orange, Extra Sporting		" No. 44....." 17 00		" Large " \$26 00....." 5%	
ZINC.		L. & R. Orange, Extra Sporting		" No. 50....." 48 00		Irwin Car....." 35%	
In slabs.....8 1/2c		1/2-lb. canisters.....32		" No. 55....." 45 00		Ford's Ship Auger pattern	
SHEET ZINC.		L. & R. Orange, Extra Sporting		" No. 60....." 42 00		Car.....List plus 5%	
Cask lots.....13c		Hercules "E.C." and "Infallible"		Post Hole.		Center.....10%	
Less than cask lots.....13 1/2 to 13 1/4c		50 can drums.....43 50		Ivan's Post Hole and Well.....25%		Countersink.	
COPPER.		Hercules "E. C." kegs.....22 50		Vaughan's, 4 to 9-in...per doz.\$13 00		No. 18 Wheeler's....per doz. \$2 25	
Copper Sheet, base.....32 1/2c		Hercules "E. C." 1/2-kegs.....11 25		Ship.		No. 20 "....." 3 00	
ANVILS.		Hercules "Infallible," 25 can		Ford's, with or without screw, Net list		American Snailhead.. " 1 75	
Trenton, 70 to 80 lbs.....9 1/2c per lb.		drums.....22 00		Broad.		" Rose "....." 2 00	
Trenton, 81 to 150 lbs.....9 1/4c per lb.		Hercules "Infallible," 10 can		No. 3 Handled.....per doz. \$0 65		" Flat....." 1 40	
ASBESTOS.		drums.....9 00		No. 1050 Handled....." 1 40		Mahew's Flat....." 1 60	
Board and Paper, upto 1/16" 17c per lb.		Hercules "E. C." 1/2-kegs. 5 75		Shouldered, assorted 1 to 4.		" Snail....." 1 90	
Thicker.....18c per lb.		Hercules "E.C." and "Infallible"		Patent asst'd. 1 to 4....." 85		Dowel.	
AXES.		canisters.....1 25		Harness.		Russell Jennings.....15%	
Boys' Handled.		Hercules Lightning Rifle,		Common....." 1 05		Gimlet.	
Niagara.....12 50		canisters.....1 25		Patent....." 1 00		Standard Double Cut.	
Scratch.		Hercules Sharpshooter Rifle,		Peg.		Doz. \$1 10—\$1 60	
No. IS, socket hand'ld. per doz. 2 50		canisters.....1 25		Shouldered....." 1 60		Countersink.....Doz. 1 80	
No. 344 Goodell-Pratt.		Hercules Unique Rifle, canisters 1 50		Patented....." 75		Reamer.	
List, less.....35-40%		Hercules Bullseye Revolver,		Scratch.		Standard Square.....Doz. 2 50	
No. 7 Stanley.....2 25		canisters.....1 00		No. IS, socket hand'ld. per doz. 2 50		American Octagon... " 2 50	
Screw Driver.		Cask lots.....13c		List, less.....35-40%		No. 1 Common....." 1 40	
No. 1 Common....." 1 40		Less than cask lots.....13 1/2 to 13 1/4c		No. 7 Stanley.....2 25		No. 26 Stanley....." 1 75	